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# Report on the Demographic Situation in Canada 2001

*Current Demographic Analysis*

- A Comparative Study of Recent Trends in Canadian and American Fertility, 1980-1999
- Changing Demographic Trends and the Use of Home Care Services



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# Report on the Demographic Situation in Canada 2001

*Current Demographic Analysis*

**Alain Bélanger, Editor**

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July 2002

Catalogue no. 91-209-XPE

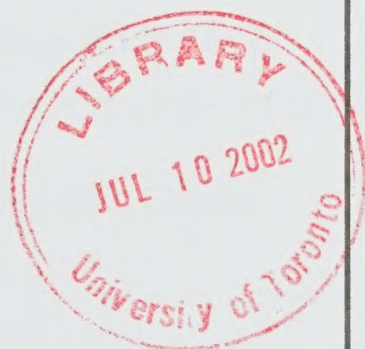
Frequency: Annual

ISSN 0715-9293

Ottawa

The text was originally written in French.

La version française de cette publication est disponible sur demande (n° 91-209-XPF au catalogue).



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## **Acknowledgements**

The editor is grateful to all those who have contributed to this publication. In particular, he addresses his thanks to Réjean Lachapelle, Doug Norris, and Mike Sheridan for their revision and comments and to Russell Wilkins, Tomas Frejka and Peter McDonald for their comments on different parts of this Report. Special thanks are addressed to Carol D’Aoust, research assistant, for his dedication and initiative, which are fully appreciated.







# Table of Contents

	Page
Highlights .....	1
 <b>PART I - Current Demographic Analysis for Canada, 2001</b> <i>by Alain Bélanger et Laurent Martel</i>	
Demographic Accounts .....	9
Births and Fertility .....	20
Mortality .....	30
International Immigration .....	39
Internal Migration .....	50
Appendices .....	57
Glossary .....	100
 <b>PART II</b>	
<b>A Comparative Study of Recent Trends in Canadian and American Fertility, 1980-1999</b> <i>by Alain Bélanger and Geneviève Ouellet</i> ..... 107	
 <b>Changing Demographic Trends and the Use of Home Care Services</b> <i>by Yves Carrière, Laurent Martel, Jacques Légaré and Lucie Morin</i> ..... 137	



# List of Tables

	Page
<b>PART I</b>	
1. Population as of January 1st and Population Growth Components, Canada, 1972-2001 .....	10
2. Distribution of Population by Major Age Groups, Canada, Provinces and Territories, 1971-2001 .....	13
3. Number of Deaths of Persons Aged 90 or Over, Canada, 1981-1999 .....	30
4. Life Expectancy at Birth for Selected Industrialized Countries, 1978-1997 .....	32
5. Evolution of Mortality from Diseases of the Circulatory System and from Tumours, by Sex, Canada, 1971-1999 .....	35
6. Standardized Suicide Death Rates, Canada, Provinces and Territories, 1970-1999 .....	37
7. Suicide Death Rates by Sex and Age Group, Quebec and Rest of Canada, 1995-1999 .....	38
8. Number of Immigrants Admitted and Number Planned by Class According to the Immigration Plan, Canada, 2000 .....	39
9. Immigrants to Canada by Class, 1980-2000 .....	41
10. Number of Immigrants According to the 10 Main Countries of Birth by Class, Canada, 2000 .....	43
11. Countries of Birth from Which more than 2,000 Immigrants Came to Canada in 1998, 1999 or 2000 .....	44
12. Percentage Distribution of Landed Immigrants by Intended Province of Destination, Canada, 1971, 1981, 1986, 1989-2000 .....	46
13. Number of Immigrants and Percentage Distribution by Province of Destination and Class, Canada, 2000 .....	48
14. Net Migration for Provinces and Territories, 1972-2000 .....	51
15. Annual Number of Interprovincial Migrants According to Revenue Canada Tax Files, 1999 .....	52
16. Annual Number of Interprovincial Migrants According to Revenue Canada Tax and Child Tax Credit Files, 2000 .....	53
17. Proportion of Returning Migrants Among Interprovincial In-migrants, Population 5 Years of Age and Over and Born in Canada, Canada, Provinces and Territories, 1991-1996 .....	55
<i>Box</i>	
Summary Table. Rates and Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2000 .....	16

List of Tables - Continued

	Page
<i>Appendices</i>	
A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2001 .....	58
A2. Number of Marriages and Crude Marriage Rate, Canada, Provinces and Territories, 1981, 1986-1998 .....	84
A3. Age-specific First Marriage Rates by Age, Sex and Year of Birth, Canada .....	85
A4. Number of Divorces and Mean Duration of Marriages for Persons Divorced in the Year, Canada, Provinces and Territories, 1981, 1986, 1989-1998 .....	87
A5. Duration-specific Divorce Rate, Canada, Marriage Cohorts 1948-1949 to 1997-1998 .....	88
A6. Number of Live Births and Total Fertility Rate, Canada, Provinces and Territories, 1986-1999 .....	90
A7. Fertility Rate by Birth Order and by Age Group, Canada, Provinces and Territories, 1997-1999 .....	91
A8. Age-specific Fertility and Total Fertility Rates by Birth Order and Age of Mother for Quebec and Rest of Canada, 1986, 1989-1999 ....	92
A9. Number of Total Deaths and Infant Deaths, Canada, Provinces and Territories, 1981, 1986, 1989-1999 .....	94
A10. Life Expectancy at Different Ages, Canada, 1971 to 1999 .....	95
A11. Landed Immigrants in Canada by Country of Birth, 1981, 1986, 1991-2000 .....	96
A12. Population as of July 1st, by Age and Sex, Canada, 1998, 1999, 2000	98

PART II

A Comparative Study of Recent Trends in Canadian and American Fertility, 1980-1999

1. Completed or Cumulative Fertility Rates at Various Ages for Selected Cohort Groups, Canada and United States, 1945-1949 to 1975-1979	114
2. Percentage Distribution of Female Users of Contraceptive Methods by Method Used and Age Group, Canada and United States, 1995 .	123
3. Abortion Rate by Age Group, Canada and United States, 1990 and 1997 .....	127



List of Tables - Continued

	Page
<b>Changing Demographic Trends and the Use of Home Care Services</b>	
1. Characteristics of the Population Aged 65 or Over Living in Private Households According to Whether or Not They Receive Assistance in Performing Daily Activities, Canada, 1996 .....	145
2. Percent Distribution of the Population Aged 65 or Over Living in Private Households and Receiving Assistance in Performing Daily Activities According to the Source of Assistance, Canada, 1996 ....	146
3. Odds Ratios Relating the Source of Assistance Received Because of a Long Term Health Problem According to Certain Characteristics of the Elderly Population, Canada, 1996 .....	148
4. Probability for a Woman to Have No Children, by Cohort, Canada, 1991 .....	153
 <i>Boxes</i>	
1996 General Social Survey – Social and Community Support .....	140
Multinomial Logistic Regression Model .....	143
Interpretation of Odds Ratios .....	147

# List of Figures

	Page
<b>PART I</b>	
1. Fertility Rate by Age Group, Canada, 1972-1999 .....	21
2. Average Age at Maternity by Birth Order, Canada, 1944-1999 .....	22
3. Total Fertility Rate, 1921-1999 and Completed Fertility, 1893-1971, Canada .....	23
4. Total Fertility Rate Corrected and Uncorrected for the Tempo Effect, Canada, 1980-1998 .....	24
5. Fertility Rate by Age for Selected Cohorts, Canada .....	25
6. Total Fertility Rate for Selected Industrialized Countries, 1979-1998 .....	28
7. Annual Gains in Life Expectancy Broken Down by Major Age Group, Canada, 1981-1999 .....	33
8. Number of Immigrants and Immigration Rate, Canada, 1944-2000 ....	40
9. Proportion of Immigrants Going to Ontario, Quebec, British Columbia and Alberta, 1971-2000 .....	47
10. Proportion of Immigrants Going to the Three Main Census Metropolitan Areas of Canada, 1980-2000 .....	49
<b>PART II</b>	
<b>A Comparative Study of Recent Trends in Canadian and American Fertility, 1980-1999</b>	
1. Total Fertility Rate, Canada and United States, 1940-1999 .....	110
2. Total Fertility Rate, Canada and United States by Ethno-racial Group, 1980-1998 .....	111
3. Mean Age at First Birth, Canada and United States, 1980-1998 .....	113
4. Change in Fertility Rates by Age Group, Canada and United States, 1979-1999 .....	116
5. Fertility Rates by Age Group, Canada and United States, 1980 and 1999 .....	117
6. Average Number of Children Desired by Age Group, Women Aged Between 15 and 44, Canada and United States, 1995 .....	119
7. Proportion of Females Aged 15 to 44 Who Report Wanting at Least One More Child According to Number of Children Already Born, Canada and United States, 1995 .....	120
8. Proportion of Women Aged 15 to 44 Who Use a Contraceptive Method by Age Group, Canada and United States, 1995 .....	122



List of Figures- Continued

	Page
9. Total Abortion Rate, Canada and United States, 1976-1997 .....	126
10. Proportion of Women who Report Being Married at the Time of the Survey by Age Group, Canada and United States, 1995 .....	128
11. Proportion of Women who Report Practising their Religion Weekly by Age Group, Canada and United States, 1995 .....	130
12. Unemployment Rate of Youths Aged 20-24 by Sex, Canada and the United States, 1980-1998 .....	131

Changing Demographic Trends and the Use of Home Care Services

1. Distribution of the Elderly Population Living in Private Households According to Disability, Physical Dependence and Source of Assistance, Canada, 1996 .....	141
2. Conditional Probabilities of Receiving Assistance from Informal, Formal or Mixed Sources According to Certain Characteristics of the Elderly Population Who Received Assistance Because of a Long Term Health Problem, Canada, 1996 - Continued .....	149
3. Conditional Probabilities of Receiving Assistance from Informal, Formal or Mixed Sources for Certain Profiles of Males and Females Aged 65 or Over Who Received Assistance Because of a Long Term Health Problem, Canada, 1996 .....	155

# Highlights

## PART I

- Canada's population grew by 277,200 persons in 2000. The corresponding rate of increase (9.0 per 1,000) was up slightly from the previous year (8.6 per 1,000).
- Net migration accounted for 61% of total growth and is currently the main factor in Canadian population growth.
- Natural increase, which was relatively low, was down in all provinces, but no province has yet registered a negative rate of natural increase. In Newfoundland and Labrador as well as Saskatchewan, natural increase was no longer sufficient to offset negative net migration, and the population declined.
- Alberta was by far the Canadian province with the strongest population growth in 2000. Exceeding 18 per 1,000 in 2000, that province's population growth rate was double the rate for Canada. Although Alberta's rate of natural increase was larger than that of all other provinces, it was not greatly different from theirs, and most of that province's robust growth resulted from its net gains in interprovincial migration (9 per 1,000).
- With a rate of 14.7 per 1,000, Ontario posted the second highest population growth in Canada. It owed this primarily to its net international migration (10.8 per 1,000).
- In British Columbia, net international migration continued to be positive (28,900), offsetting the province's interprovincial migratory losses (-17,300) and enabling it to post a growth rate of 6.8 per 1,000 in 2000. But for British Columbia, this was a marked slowdown compared with the growth rates in excess of 25 per 1,000 that it experienced between 1989 and 1996.
- Quebec now accounts for less than one quarter of the population, while Ontario is approaching two fifths. Together, Alberta and British Columbia (23%) have nearly the same demographic weight as Quebec (24%), whereas in 1971, 28% of Canadians resided in Quebec compared with a total of 18% in those two Western provinces.

xxx

- In 1999, the total fertility rate reached 1.52 children per woman, down slightly (1%) from 1998. While some industrialized countries have even lower fertility, the United States, the United Kingdom, Australia and France have a higher fertility rate than Canada.



- Newfoundland and Labrador, with a rate of 1.26 children per woman, was the province with the lowest fertility. Manitoba and Saskatchewan, with 1.81 children per woman, had the highest.
- Nunavut stood out from the rest of Canada with a fertility rate of 3.25 children per woman.
- Not only are Canadian women having fewer children, but they are having them later in life. The fertility rate of young Canadian women between 20 and 24 years of age was only half the rate posted by their mothers when they were in that age range. The average age at childbearing reached 28.7 years in 1999, continuing an upward trend that began in the mid-1970s.
- No cohort of women born during the baby-boom has had enough children to ensure its replacement.

**XXX**

- In 1999, life expectancy at birth reached 81.7 years for females and 76.3 for males. The gap between male and female life expectancies has continued to narrow and was only 5.4 years in 1999, in favour of females.
- The number of deaths is increasing by approximately 1% per year because of the growth and aging of the Canadian population.
- Most of the additional deaths registered in 1998 and 1999 compared with 1997 occurred among those 85 and over.
- Life expectancy at 65 continues to increase, and in 1999 it reached 16.5 years for men and 20.3 years for women.
- According to the mortality conditions observed in 1999, one Canadian male in three and one Canadian female in two would reach age 85.
- Death by suicide is nearly stable in Canada. However, in Quebec the suicide death rate has been rising for 30 years and is currently 50% higher than in the rest of Canada.

**XXX**

- Canada received 227,300 immigrants in 2000, an increase of 20% compared with 1999. During the 1990s, more than 2,200,000 persons were admitted as immigrants.
- The majority of immigrants arriving in Canada in 2000 came from Asian countries (62%) and entered under the “economic” component of the Canadian immigration policy (58%). China, India, Pakistan and the Philippines were the main countries supplying immigrants.

- In 2000 there were more than 30,000 refugees, up 23% from the year before. Their main countries of origin were the former Yugoslavia, Sri Lanka and Afghanistan.
- Three provinces attracted 90% of new arrivals: Ontario, British Columbia and Quebec. In fact, 59% of immigrants arriving in 2000 chose Ontario as their province of residence, with most of them settling in Toronto.
- Among immigrants choosing Quebec, one in four was a refugee. In Ontario, the corresponding proportion was one in ten.

xxx

- Only Ontario and Alberta had positive interprovincial net migration in 2000. British Columbia and Quebec had the largest net losses in interprovincial migration, the former to the benefit of Alberta and the latter to the benefit of Ontario.
- Over the past thirty years, Quebec has lost nearly a half million persons in migration to other Canadian provinces, especially Ontario.
- Of native-born Canadians migrating to Newfoundland and Labrador, 60% were born in that province. The corresponding proportion was 52% for Quebec and 43% for Saskatchewan, while the national average was 28%.

## PART II

- In 1999, Canada's fertility rate fell to an all-time low of 1.52 children per woman. The same year, the U.S. rate was 2.08 children per woman. The gap between the two countries, amounting to approximately half a child per woman in favour of the United States, represents what could be called Canada's fertility deficit.
- Not only total fertility rates are higher for American women, but completed fertility rates of all groups of cohorts born after 1945 are also higher.
- The ethnic make-up of the U.S. population does not entirely explain the fertility differences observed between the two countries, since all American ethnic groups have a higher rate than Canadian women. At most, the higher fertility rates of American women who are black or of Hispanic origin would appear to explain 40% of the observed difference.



- Between 1980 and 2000, the fertility rate of American women of Hispanic origin stayed at around 3.0 children, while that of black women ranged between 2.2 and 2.4 children and that of non-Hispanic white women ranged between 1.8 and 1.9 children. There was thus a gap of 0.3 children between the total fertility rate of Canadian women and that of American non-Hispanic white women, the group exhibiting the lowest fertility in the United States.
- The growing fertility gap between American women and Canadian women results from the fact that young American women have maintained a higher fertility rate, while young Canadian women's fertility has declined significantly. The fertility of American women aged 20 to 29 has held steady and even increased slightly, while that of Canadian women of the same age has dropped considerably. Between 1979 and 1999, fertility has declined by nearly 40% among Canadian women aged 20 to 24 and by nearly 25% among those aged 25 to 29.
- The fertility rate at 15-19 years of age exceeds 50 per 1,000 in the United States, whereas in Canada it is less than 20 per 1,000. Approximately 30% of the difference observed between the U.S. and Canadian total fertility rates is due to the higher fertility of American teenage girls. No other industrialized country has juvenile fertility rates as high as those observed in the United States.
- Canadian women use more effective contraceptive methods than American women. In Canada, 46% of women using contraception opted for sterilization, compared with 41% in the United States. Pharmaceutical methods (the pill, IUD, implant) are also more popular in Canada (37%) than in the United States (31%). In Canada, the public health care system provides universal and free access to medical services, whereas in the United States, such services can be costly, making the most effective contraceptive methods less accessible.
- The younger the age group considered, the greater the gap between the proportions of Canadian and American women using an effective contraceptive method. For example, whereas in Canada, 86% of female users aged 15 to 19 use a pharmaceutical method (primarily the pill) and 14% use a natural or barrier method (mainly the condom), the corresponding proportions in the United States are 57% and 42%.
- Part of the reason why fertility is relatively high in the United States is the large proportion of unwanted pregnancies and births. In the mid-1980s, it was estimated that the proportion of unwanted pregnancies was 60% higher in the United States than in Canada.
- The total abortion rate is higher in the United States, where it is holding steady at about 0.8 abortions per woman, whereas the Canadian rate is 0.5 abortions per woman.

- By comparison with the Canadian situation, marriage is earlier and more common in the United States.
- Women tend to bear children earlier in the United States. The average age at childbearing is nearly 29 years in Canada, whereas it is 27 years in the United States. It is possible that because young people in Canada find it harder to integrate into the labour market than their American counterparts, they may postpone forming conjugal unions and having children.
- The gap between the unemployment rates of young Canadians and Americans aged 20 to 24 continues to widen. In the early 1980s, youth unemployment rates were similar in the two countries and indeed were sometimes lower in Canada, but since 1983 the youth unemployment rate has consistently been higher in Canada than in the United States. Since 1991, the unemployment rate of young Canadians has consistently been 50% to 70% higher than that of young Americans.
- Religious practice indirectly influences individuals' fertility, especially in its effect on the choice of marriage as a mode of conjugal life and the stability of the union. The rate of religious practice is much higher in the United States than in Canada. Among women of childbearing age, the proportion of Americans (34%) who reported practising their religion on a weekly basis was nearly double the rate for Canadians (18%).

XXX

- In 1996, 20% of the elderly population living in private households received assistance for either everyday housework, grocery shopping, preparation of meal or personal care because of a long term health problem.
- Among elderly persons who received assistance because of a long term health problem, 42% received assistance only from informal sources (family, friends, and neighbours), 34% from formal sources (paid employees, government or non-government organizations and volunteers) and the remaining 24% received help from a mix of informal and formal sources.
- Having no surviving children reduces significantly the probability of using strictly informal sources of assistance. This probability was 0.32 for those without any surviving children compared to 0.44 for elderly persons with at least one surviving child.
- The younger the spouse, the greater the probability of using strictly informal sources of assistance. Among elderly persons receiving assistance, this probability was 0.32 for those with a spouse aged 75 years or over compared to 0.26 for those living alone.



- There was a strong positive association between the level of schooling and the probability of using strictly formal sources of assistance. Among elderly persons receiving assistance and living in private households, this probability increased from 0.28 for those without secondary schooling compared to 0.52 for those with post-secondary schooling.
- When considering only the changing nature and extent of the family network, the results point to a relative increase in the use of formal home care services in the future among those receiving assistance. The changing socio-demographic characteristics of the elderly population (improvement in the level of schooling for example), along with the changing social context (migration of children, divorce, remarriage, etc.) and policies regarding institutionalization of the disabled elderly population will also have important effects on the nature, formal or informal, of services received.

# PART I





## DEMOGRAPHIC ACCOUNTING

According to population estimates, *Canada had 30,893,800 inhabitants on January 1, 2001, an increase of 277,200 compared with the same date the previous year* (Table 1). The corresponding growth rate (9.0 per 1,000) is up slightly from last year, owing to an increase in net migration. Since 1998, net international migration has grown steadily. In 2000 it stood at 168,000, owing to the admission of 227,400 immigrants and the departure of 64,100 emigrants. *Net migration accounts for 61% of overall growth, and thus it is currently the main factor in Canada's population growth.*

Without migration, the Canadian population would be growing much more slowly: the rate of natural increase in 2000 was 3.6 per 1,000, with births exceeding deaths by 109,200. This continues a downward trend that began in the early 1990s and is bound to continue because of the aging of the population. Indeed, the number of deaths has been rising steadily since the early 1980s, despite the increase in life expectancy at birth. In this context, net migration is expected to account for an increasing proportion of future growth.

### Demographic Accounting in the Provinces

With a population estimated at 11,759,700 on January 1, 2001, Ontario is Canada's most populous province. It is followed by Quebec (7,388,400 inhabitants), British Columbia (4,072,500) and Alberta (3,034,500). There are just over one million inhabitants in each of the other two Prairie provinces, Manitoba (1,147,500) and Saskatchewan (1,019,300). None of the Atlantic provinces, namely Nova Scotia (942,700), New Brunswick (756,000), Newfoundland and Labrador (536,200) and Prince Edward Island (138,200), reach this figure, although the former comes close. The vast territories in Canada's north remain very sparsely settled: there were 30,100 inhabitants in Yukon, 40,900 in the Northwest Territories and 27,700 in Nunavut, for a total of 98,700. This, then, is less than for Prince Edward Island, the least populous province.

The provinces differ not only in population size but also in their growth rates. *These differ primarily because net migration varies substantially from one province to another. Natural increase, which is relatively low and declining throughout Canada, varies much less.* With a rate of natural increase of 6.5 per 1,000, Alberta ranks first on this score. No province has a negative rate of natural increase, although the province of Newfoundland and Labrador is approaching zero growth (0.6 per 1,000).

*With a growth rate exceeding 18.0 per 1,000 in 2000, double the rate observed for Canada, Alberta had by far the strongest population growth*



**Table 1. Population as of January 1st and Population Growth Components, Canada, 1972-2001**

Year	Population as of January 1st	Growth			Births	Deaths	Immigration	Emigration	Non-permanent Residents (net)	Residual <sup>1</sup>
		Total	Natural	Migratory						
1972	22,093.1	256.0	184.9	98.8	347.3	162.4	122.0	26.2	3.0	-27.7
1973	22,349.2	303.0	179.3	151.4	343.4	164.0	184.2	40.7	7.9	-27.7
1974	22,652.2	325.6	178.9	174.5	345.6	166.8	218.5	42.0	-2.0	-27.7
1975	22,977.8	326.0	192.1	161.5	359.3	167.2	187.9	34.3	7.9	-27.7
1976	23,303.8	288.0	193.0	118.2	360.0	167.0	149.4	28.3	-3.0	-23.1
1977	23,591.8	258.7	194.7	83.8	362.2	167.5	114.9	29.1	-2.0	-19.8
1978	23,850.5	222.0	190.2	51.7	358.4	168.2	86.3	31.7	-3.0	-19.8
1979	24,072.6	273.6	197.9	95.5	366.1	168.2	112.1	24.5	7.9	-19.8
1980	24,346.2	319.8	199.2	140.4	370.7	171.5	143.1	17.6	14.9	-19.8
1981	24,665.9	313.9	200.3	134.3	371.3	171.0	128.6	24.6	30.3	-20.8
1982	24,979.8	263.6	198.7	86.4	373.1	174.4	121.1	31.1	-3.7	-21.4
1983	25,243.4	239.5	199.2	61.7	373.7	174.5	89.2	31.8	4.4	-21.4
1984	25,482.9	238.7	201.3	58.8	377.0	175.7	88.2	29.1	-0.3	-21.4
1985	25,721.6	241.4	194.4	68.4	375.7	181.3	84.3	26.9	11.0	-21.4
1986	25,963.1	297.1	188.7	122.1	372.9	184.2	99.2	23.7	46.5	-13.7
1987	26,260.1	349.5	184.8	172.9	369.7	185.0	152.1	20.1	40.9	-8.2
1988	26,609.7	432.2	186.8	253.6	376.8	190.0	161.9	17.2	108.9	-8.2
1989	27,041.9	433.3	201.7	239.7	392.7	191.0	192.0	19.6	67.4	-8.2
1990	27,475.2	388.4	213.5	183.1	405.5	192.0	214.2	20.2	-11.0	-8.2
1991	27,863.6	319.7	207.0	137.3	402.5	195.6	230.8	25.3	-68.3	-24.6
1992	28,183.3	365.1	202.1	199.2	398.6	196.5	252.8	21.7	-31.9	-36.3
1993	28,548.3	317.5	183.5	170.3	388.4	204.9	255.7	22.2	-63.3	-36.3
1994	28,865.8	325.3	178.0	183.6	385.1	207.1	223.8	23.7	-16.5	-36.3
1995	29,191.1	318.3	167.3	187.3	378.0	210.7	212.0	24.9	0.2	-36.3
1996	29,509.4	309.1	153.3	170.9	366.2	212.9	226.1	41.7	-13.5	-15.1
1997 PD	29,818.6	293.5	132.9	160.6	348.6	215.7	216.0	55.6	0.2	...
1998 PR	30,112.1	241.2	124.3	116.9	342.4	218.1	174.2	57.5	0.2	...
1999 PR	30,353.3	263.3	115.5	147.8	337.5	222.0	190.0	60.7	18.5	...
2000 PR	30,616.6	277.2	109.2	168.0	332.1	222.9	227.4	64.1	4.7	...
2001 PR	30,893.8	...	...	...	...	...	...	...	...	...

**Rates (for 1,000)**

Year	Population as of January 1st (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents
		Total	Natural	Migratory					
1972	22,093.1	11.52	8.32	4.45	15.63	7.31	5.49	1.18	0.13
1973	22,349.2	13.47	7.97	6.73	15.26	7.29	8.19	1.81	0.35
1974	22,652.2	14.27	7.84	7.65	15.15	7.31	9.58	1.84	-0.09
1975	22,977.8	14.09	8.30	6.98	15.53	7.22	8.12	1.48	0.34
1976	23,303.8	12.28	8.23	5.04	15.35	7.12	6.37	1.21	-0.13
1977	23,591.8	10.91	8.21	3.53	15.27	7.06	4.84	1.23	-0.08
1978	23,850.5	9.27	7.94	2.16	14.96	7.02	3.60	1.32	-0.12
1979	24,072.6	11.30	8.17	3.95	15.12	6.95	4.63	1.01	0.33
1980	24,346.2	13.05	8.13	5.73	15.13	7.00	5.84	0.72	0.61
1981	24,665.9	12.64	8.07	5.41	14.96	6.89	5.18	0.99	1.22
1982	24,979.8	10.50	7.91	3.44	14.86	6.95	4.82	1.24	-0.15
1983	25,243.4	9.44	7.85	2.43	14.73	6.88	3.52	1.25	0.17
1984	25,482.9	9.32	7.86	2.30	14.73	6.86	3.45	1.14	-0.01
1985	25,721.6	9.34	7.52	2.65	14.54	7.02	3.26	1.04	0.42
1986	25,963.1	11.38	7.23	4.68	14.28	7.06	3.80	0.91	1.78
1987	26,260.1	13.22	6.99	6.54	13.99	7.00	5.75	0.76	1.55
1988	26,609.7	16.11	6.96	9.45	14.05	7.08	6.04	0.64	4.06
1989	27,041.9	15.89	7.40	8.79	14.41	7.01	7.04	0.72	2.47
1990	27,475.2	14.04	7.72	6.62	14.65	6.94	7.74	0.73	-0.40
1991	27,863.6	11.41	7.39	4.90	14.36	6.98	8.24	0.90	-2.44
1992	28,183.3	12.87	7.13	7.02	14.05	6.93	8.91	0.76	-1.13
1993	28,548.3	11.06	6.39	5.93	13.53	7.14	8.91	0.77	-2.20
1994	28,865.8	11.21	6.13	6.32	13.27	7.13	7.71	0.82	-0.57
1995	29,191.1	10.85	5.70	6.38	12.88	7.18	7.22	0.85	0.01
1996	29,509.4	10.42	5.17	5.76	12.34	7.18	7.62	1.40	-0.45
1997 PD	29,818.6	9.79	4.44	5.36	11.63	7.20	7.21	1.86	0.01
1998 PR	30,112.1	7.98	4.11	3.87	11.33	7.21	5.76	1.90	0.01
1999 PR	30,353.3	8.64	3.79	4.85	11.07	7.28	6.23	1.99	0.61
2000 PR	30,616.6	9.01	3.55	5.46	10.80	7.25	7.39	2.08	0.15
2001 PR	30,893.8	••	••	••	••	••	••	••	••

<sup>1</sup> The residual consists of the distribution over five years of the error of closure at the end of the intercensal period.

(PD) Final postcensal estimates, (PR) Revised postcensal estimates, based on 1996, as of January 21, 2002.

**Sources:** Statistics Canada, Demography Division, Demographic Estimates Section and Research and Analysis Section.



*of any Canadian province.* The bulk of this growth results from net interprovincial migration, which reached 27,100, up 38% from the previous year. Net international migration (8,100) and natural increase (19,600), while both positive, account for much less of this province's overall increase. Sustained economic growth over the past few years continues to exert a strong pull on people living elsewhere in Canada, especially in the neighbouring provinces of British Columbia and Saskatchewan. Because migrants are generally young, the high level of migration to this province has helped slow the aging of its population. Table 2 shows that in 2001, Alberta ranked third among the provinces in the proportion of young people, behind Saskatchewan and Manitoba, which have the highest fertility rates in Canada: twenty years earlier it ranked fifth. Alberta also has the lowest proportion of elderly persons, with scarcely 10%.

In British Columbia and Saskatchewan, the two provinces bordering Alberta, net interprovincial migration is negative. In the case of British Columbia, this is a recent trend: the phenomenon first appeared in 1998. Alberta is attracting a large number of workers from both these provinces, but with differing effects. While population growth remains substantially positive in British Columbia (27,700), it has been negative for the past two years in Saskatchewan, since natural increase (3,500) is insufficient to offset a high level of negative net migration (-8,100). This province has been losing population since 1999. ***Saskatchewan also has the distinction of being a province that is both young and old:*** it ranks first among Canadian provinces not only in the proportion of young persons aged 0 to 14 (21%) but also in the proportion of those 65 and over (15%). The emigration of younger persons has a substantial impact on the proportion of working-age persons (15-64 years). At 64%, this proportion is the lowest of any province and four percentage points below the national average. ***British Columbia, for its part, largely offsets its losses from interprovincial migration by substantially positive net international migration (31,900). This gives it an overall migratory growth rate of 3.6 per 1,000 in 2000 and an overall growth rate of 6.8 per 1,000.*** For British Columbia, however, this represents a considerable slowing compared with the growth rates in excess of 25 per 1,000 that it experienced between 1989 and 1995.

Manitoba posted a population growth of 3.2 per 1,000 in 2000, almost entirely due to natural increase (4,100). This province's net migration is practically nil (-400, for a rate of -0.3 per 1,000), since negative net interprovincial migration (-3,600) is almost entirely offset by positive net international migration (3,100). It should be noted, however, that after the positive net migration recorded in 1999, which ran against the trend of the previous 13 years, the figure was again negative in 2000, although only very slightly. Further from Alberta but bordering on Ontario, Manitoba's population seems less prone than Saskatchewan's to the pull of provinces whose economies have soared in recent years.

**Table 2. Distribution of Population by Major Age Groups, Canada, Provinces and Territories, 1971-2001**

Province	1971		1981		1991		2001	
	Number (in thousands)	Proportion (%)	Number (in thousands)	Proportion (%)	Number (in thousands)	Proportion (%)	Number (in thousands)	Proportion (%)
0 to 14								
Nfld.Lab.	196.0	<b>36.9</b>	168.0	<b>29.2</b>	128.4	22.2	90.3	16.9
P.E.I.	35.5	31.5	30.6	24.7	29.4	22.5	26.7	19.2
N.S.	241.7	30.3	199.0	23.3	185.9	20.3	168.1	17.8
N.B.	204.2	31.8	174.7	24.7	154.2	20.7	134.1	17.7
Que.	1,799.6	29.3	1,407.7	21.5	1,396.8	19.8	1,306.8	17.6
Ont.	2,226.4	28.4	1,904.5	21.6	2,099.4	20.1	2,283.5	19.2
Man.	288.1	28.8	239.2	23.1	242.5	21.9	238.3	20.7
Sask.	280.9	30.1	239.5	24.5	239.3	<b>23.9</b>	215.6	<b>21.2</b>
Alta	520.1	31.2	548.8	23.9	611.2	23.6	626.7	20.5
B.C.	618.6	27.6	598.0	21.2	676.4	20.1	725.0	17.7
Yuk.	6.5	34.1	6.2	25.9	7.0	<b>24.3</b>	6.1	20.4
N.W.T. <sup>1</sup>	15.2	<b>41.8</b>	16.2	<b>34.1</b>	11.0	<b>28.5</b>	10.9	<b>26.7</b>
Nun.	..	..	..	..	8.6	<b>38.9</b>	10.4	<b>36.8</b>
Canada	6,432.8	29.3	5,532.6	22.3	5,790.2	20.7	5,842.4	18.8
15 to 64								
Nfld.Lab.	302.4	<b>57.0</b>	362.7	<b>63.1</b>	395.4	68.2	380.3	71.2
P.E.I.	64.7	57.4	78.2	63.2	83.8	64.3	93.4	67.5
N.S.	482.7	60.5	562.7	65.8	614.9	67.2	648.6	68.8
N.B.	383.2	59.7	460.7	65.2	501.8	67.3	524.4	69.3
Que.	3,919.2	63.9	4,566.8	69.7	4,885.6	69.2	5,142.9	69.4
Ont.	4,972.2	63.3	6,032.7	68.5	7,123.0	68.3	8,099.2	68.2
Man.	614.8	61.5	675.0	65.1	719.4	64.8	756.3	65.8
Sask.	556.0	59.7	619.8	63.5	622.4	<b>62.1</b>	652.3	<b>64.2</b>
Alta	1,025.1	61.5	1,580.4	68.9	1,748.5	67.4	2,126.5	69.4
B.C.	1,414.2	63.1	1,924.7	68.2	2,268.4	67.2	2,830.3	69.1
Yuk.	12.0	63.1	16.9	70.9	20.8	71.8	22.1	73.9
N.W.T. <sup>1</sup>	20.3	55.9	30.0	63.0	26.5	68.4	28.2	69.0
Nun.	..	..	..	..	13.2	59.2	17.1	60.6
Canada	13,766.9	62.7	16,910.5	68.1	19,023.5	67.9	21,321.6	68.6
65 and Over								
Nfld.Lab.	530.9	6.1	574.8	7.7	579.5	9.6	533.8	11.8
P.E.I.	112.6	<b>11.0</b>	123.7	<b>12.1</b>	130.3	13.1	138.5	13.3
N.S.	797.3	9.1	854.6	10.9	915.1	12.5	942.7	13.4
N.B.	642.5	8.6	706.3	10.0	745.5	12.0	757.1	13.0
Que.	6,137.4	6.8	6,547.7	8.8	7,064.7	11.1	7,410.5	13.0
Ont.	7,849.0	8.3	8,811.3	9.9	10,427.6	11.6	11,874.4	12.6
Man.	998.9	9.6	1,036.4	11.8	1,109.6	13.3	1,150.0	13.5
Sask.	932.0	10.2	975.9	<b>11.9</b>	1,002.7	<b>14.1</b>	1,015.8	<b>14.6</b>
Alta	1,665.7	7.2	2,294.2	7.2	2,592.6	9.0	3,064.2	10.2
B.C.	2,240.5	9.3	2,823.9	10.7	3,373.4	12.7	4,095.9	13.2
Yuk.	19.0	2.9	23.9	3.3	28.9	3.9	29.9	5.7
N.W.T. <sup>1</sup>	36.4	2.3	47.6	3.0	38.7	3.1	40.9	4.2
Nun.	..	..	..	..	22.2	1.9	28.2	2.6
Canada	21,962.1	8.0	24,820.4	9.6	28,030.9	11.5	31,081.9	12.6

<sup>1</sup> Nunavut included in 1971 and 1981.

**Sources:** Statistics Canada, Demography Division, Demographic Estimates Section and Research and Analysis Section.



***While Ontario, with a rate of 14.7 per 1,000, has the second highest population growth in Canada after Alberta, it owes this primarily to its strongly positive net international migration (103,200).*** In the past four years, it has moved ahead of British Columbia in this regard. In 2000, Ontario's immigration rate was 11.4 per 1,000, compared with 9.2 for British Columbia. ***Thus, Alberta's growth is primarily driven by the dynamics of internal migration, while Ontario's is propelled by international immigration.*** Ontario's interprovincial in-migrant and out-migrant numbers are sizable (respectively 86,800 and 64,200), making that province a real hub of the Canadian migration system, but the resulting net figure is much less sizable (22,700, for a rate of 1.9 per 1,000). However, this figure has been rising since 1992.

The growth of Quebec's population slowed slightly between 1999 and 2000, going from 3.7 per 1,000 to 3.3 per 1,000. The explanation lies in the province's net migration. In 2000, Quebec received more immigrants (32,500) and migrants from other provinces (24,000), but it also saw its numbers of emigrants (11,900) and migrants to other provinces (36,400) increase even more rapidly. Natural increase remained unchanged at 18,700.

The Maritime provinces have been gradually approaching zero population growth, year after year. Growth is 1.8 per 1,000 in Prince Edward Island, 1.6 in Nova Scotia and 1.3 in New Brunswick. In each of these provinces, the main factor in population growth is natural increase. This is because net migration is low, whether positive, as in the case of Nova Scotia (0.6 per 1,000), or negative, for New Brunswick (-0.3 per 1,000) and Prince Edward Island (-0.1 per 1,000). In absolute numbers, net migration in each of these provinces is no more than 500.

***For an eighth consecutive year, Newfoundland and Labrador registered negative population growth*** (-3,800, which represents a rate of -7.1 per 1,000). Natural increase (0.6 per 1,000) in this province remains positive but continues to decline and is approaching zero. The explanation for the depopulation trend lies in the flow of migrants between this province and the others. The effects on the age structure are already being felt (Table 2): whereas this was the province with the highest proportion of young persons in 1971 and 1981 with 37% and 29% respectively, in the space of twenty years it has become the province with the smallest proportion of young persons under 15 years of age (17%). The bulk of its population is between 15 and 64 years of age: for this age group it ranks first among Canada's provinces with 71%, while it ranks ninth in the proportion of elderly.

The populations of Canada's three territories exhibit a very different demographic pattern from the provinces. In 2000, Yukon had a negative growth rate (-18.6 per 1,000), unlike in the previous two years. This was due to highly negative net interprovincial migration (-24.7 per 1,000), whereas natural increase remained positive (7.5 per 1,000) although it has been declining steadily

for four years. Population growth was also negative in the Northwest Territories in 2000 (-1.7 per 1,000): this was a reversal after the slight increase registered the previous year. Natural increase, which was down slightly, was not sufficient, as it was in 1999, to offset negative interprovincial migration, which deteriorated. Lastly, Nunavut is the Canadian territory with the highest population growth (20.6 per 1,000). It is worth noting that Alberta, with a rate in excess of 18 per 1,000, approaches Nunavut's figure, indicating the strength of that province's growth. For Nunavut, natural increase (20.2 per 1,000) is the main factor in population growth, since net migration is practically nil (0.4 per 1,000). The proportion of persons aged 65 and over is much lower in the three territories than in the provinces (Table 2).

### **The Demographic Weight of Canada's Provinces**

As a result of different growth rates, the demographic weight of the provinces within Confederation is changing. In this zero-sum game, some win and others lose. *Alberta, British Columbia and Ontario are the only three provinces to have seen their demographic weight within Canada increase between 1971 and the present.* Taken together, Alberta and British Columbia now account for almost a quarter of the Canadian population (23%); the corresponding proportion was 18% in 1971.

As Canada's second largest province, Quebec has seen the gap between it and neighbouring Ontario widen in the past 30 years. While Ontario has almost 40% of the Canadian population, Quebec now has less than a quarter of the total. *In fact, in 2001, Western Canada (Alberta and British Columbia) had nearly the same demographic weight as Quebec, whereas in 1971, 28% of Canadians resided in Quebec compared with 18% in the two western provinces combined.* Manitoba, Saskatchewan, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland and Labrador have also seen their demographic weight decrease since 1971. It may be concluded that the population is tending to concentrate in the three most populous provinces other than Quebec, which are favoured by migration, whether international (Ontario and British Columbia) or interprovincial (Alberta). These provinces continue to show higher population growth rates than the other provinces.



**Summary Table. Rates and Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2000**

	Year	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.
Birth Rate (per 1,000)	1981	17.7	15.4	14.1	14.9	14.6	13.9	15.5
	1986	14.1	15.0	13.9	13.5	12.6	14.2	15.6
	1991	12.4	14.4	13.1	12.7	13.8	14.5	15.6
	1996	10.2	12.5	11.3	10.9	11.7	12.6	13.7
	1997	9.8	11.6	10.6	10.5	10.9	11.8	12.9
	1998	9.1	11.0	10.2	10.5	10.4	11.7	12.7
	1999	8.9	10.9	10.1	10.3	10.0	11.4	12.6
	2000 (P)	8.8	10.8	9.9	10.2	9.7	11.2	12.4
Mortality Rate (per 1,000)	1981	5.6	8.0	8.1	7.3	6.5	7.1	8.3
	1986	6.1	8.7	8.2	7.5	7.0	7.2	8.2
	1991	6.6	9.1	7.9	7.3	7.0	7.0	8.1
	1996	7.0	9.3	8.3	7.8	7.2	7.1	8.4
	1997	7.8	7.5	8.6	7.9	7.5	7.1	8.4
	1998	7.7	8.8	8.6	8.4	7.4	7.0	8.6
	1999	8.0	8.9	8.7	8.5	7.5	7.2	8.7
	2000 (P)	8.2	8.9	8.9	8.6	7.2	7.3	8.8
Total Fertility Rate (number of children per woman aged 15-49)	1981	..	1.88	1.62	1.68	1.57	1.58	1.83
	1986	..	1.79	1.59	1.53	1.38	1.60	1.83
	1991	1.44	1.86	1.59	1.55	1.65	1.67	1.97
	1996	1.30	1.73	1.52	1.46	1.60	1.61	1.89
	1997	1.27	1.63	1.45	1.43	1.52	1.53	1.81
	1998	1.21	1.56	1.42	1.45	1.47	1.53	1.81
	1999	1.26	1.58	1.43	1.42	1.45	1.52	1.81
Total First Marriage Rate (per 1,000) (males aged 17-49, females aged 15-49)	1981 M	653	701	686	660	546	692	722
	F	631	668	672	649	560	685	712
	1986 M	589	711	595	600	430	623	615
	F	580	742	631	626	442	658	660
	1991 M	600	727	575	581	381	610	600
	F	613	730	606	608	427	653	651
	1996 M	607	747	586	581	327	579	582
	F	624	782	597	618	363	609	626
	1997 M	630	689	557	550	329	567	572
	F	654	718	582	587	362	597	610
	1998 M	650	694	565	557	317	567	593
	F	670	727	579	591	350	599	635
Rate of Natural Increase (per 1,000)	1981	12.0	7.3	6.0	7.6	8.0	6.7	7.2
	1986	7.9	6.3	5.7	6.0	5.6	7.0	7.4
	1991	5.8	5.3	5.2	5.4	6.8	7.5	7.5
	1996	3.2	3.1	3.0	3.0	4.5	5.5	5.3
	1997	2.0	4.1	2.0	2.6	3.5	4.8	4.5
	1998	1.4	2.2	1.6	2.1	3.0	4.6	4.1
	1999	1.0	2.0	1.3	1.8	2.5	4.3	3.8
	2000 (P)	0.6	1.9	1.1	1.6	2.5	4.0	3.6
Total Growth Rate (per 1,000)	1981	-1.1	1.7	3.9	0.1	6.5	10.7	7.4
	1986	-2.8	1.1	4.8	1.7	9.1	18.3	6.3
	1991	2.1	0.9	5.5	4.8	7.1	12.2	3.6
	1996	-12.2	7.4	3.9	1.6	4.2	12.2	3.9
	1997 (PD)	-13.3	2.4	2.6	0.9	3.2	13.2	0.8
	1998 (PR)	-12.9	3.0	1.8	-1.0	3.2	11.1	2.6
	1999 (PR)	-5.4	5.1	4.0	2.2	3.7	13.0	4.1
	2000 (PR)	-7.1	1.8	1.6	1.3	3.3	14.7	3.2

See notes at the end of this table.

**Summary Table. Rates and Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2000 - Continued**

	Year	Sask.	Alta	B.C.	Yuk.	N.W.T.	Nun.	Can.
Birth Rate (per 1,000)	1981	17.6	18.6	14.7	21.9	27.5 <sup>4</sup>	..	15.0
	1986	17.0	18.1	14.0	19.5	27.6 <sup>4</sup>	..	14.3
	1991	15.3	16.5	13.5	19.8	33.1 <sup>4</sup>	..	14.4
	1996	13.1	13.6	11.9	13.9	19.4	29.4	12.3
	1997	12.6	13.0	11.3	14.8	17.4	28.7	11.6
	1998	12.5	13.1	10.8	12.6	16.5	25.3	11.3
	1999	12.4	12.8	10.4	12.3	16.4	25.5	11.1
	2000 (P)	12.3	12.2	10.0	12.1	16.6	25.7	10.8
Mortality Rate (per 1,000)	1981	7.7	5.6	7.0	5.8	4.1 <sup>4</sup>	..	6.9
	1986	7.8	5.6	7.1	4.6	4.3 <sup>4</sup>	..	7.1
	1991	8.1	5.6	7.1	4.0	4.8 <sup>4</sup>	..	7.0
	1996	8.6	5.9	7.1	3.8	3.6	4.7	7.2
	1997	8.5	5.8	6.9	3.8	3.3	4.6	7.2
	1998	8.7	5.8	7.0	4.3	3.5	5.4	7.2
	1999	8.8	5.7	7.0	4.4	3.6	5.5	7.3
	2000 (P)	9.0	5.7	6.7	4.6	3.7	5.5	7.2
Total Fertility Rate (number of children per woman aged 15-49)	1981	2.12	1.87	1.64	2.06	2.86 <sup>4</sup>	..	1.65
	1986	2.03	1.86	1.62	1.95	2.85 <sup>4</sup>	..	1.60
	1991	2.04	1.90	1.69	2.15	2.47	3.55	1.71
	1996	1.89	1.74	1.55	1.67	2.25	3.37	1.62
	1997	1.83	1.68	1.48	1.82	2.02	3.36	1.55
	1998	1.81	1.71	1.45	1.60	1.97	2.98	1.54
	1999	1.81	1.70	1.42	1.59	1.92	3.25	1.52
	2000 (P)	1.81	1.70	1.42	1.59	1.92	3.25	1.52
Total First Marriage Rate (per 1,000) (males aged 17-49, females aged 15-49)	1981 M	710	644	684	693	457 <sup>4</sup>	..	645
	F	698	689	695	715	474 <sup>4</sup>	..	651
	1986 M	588	566	582	484	351 <sup>4</sup>	..	558
	F	628	616	623	573	399 <sup>4</sup>	..	589
	1991 M	622	597	601	470	284 <sup>4</sup>	..	548
	F	656	643	661	521	311 <sup>4</sup>	..	594
	1996 M	628	569	521	453	268 <sup>4</sup>	..	513
	F	653	613	563	486	282 <sup>4</sup>	..	549
	1997 M	632	565	502	411	260 <sup>4</sup>	..	505
	F	653	607	540	422	308 <sup>4</sup>	..	539
	1998 M	638	571	506	427	282 <sup>4</sup>	..	506
	F	645	614	538	467	313 <sup>4</sup>	..	539
	2000 (P)	645	614	538	467	313 <sup>4</sup>	..	539
	2000 (P)	645	614	538	467	313 <sup>4</sup>	..	539
	2000 (P)	645	614	538	467	313 <sup>4</sup>	..	539
	2000 (P)	645	614	538	467	313 <sup>4</sup>	..	539
Rate of Natural Increase (per 1,000)	1981	9.9	13.0	7.7	16.1	23.3 <sup>4</sup>	..	8.1
	1986	9.2	12.5	6.9	14.9	23.3 <sup>4</sup>	..	7.2
	1991	7.2	10.9	6.4	15.8	28.3 <sup>4</sup>	..	7.4
	1996	4.5	7.7	4.8	10.2	15.8	24.7	5.2
	1997	4.1	7.2	4.3	11.0	14.1	24.1	4.4
	1998	3.8	7.3	3.8	8.3	13.0	19.9	4.1
	1999	3.6	7.0	3.5	7.9	12.8	20.0	3.8
	2000 (P)	3.4	6.5	3.3	7.5	12.9	20.2	3.6
Total Growth Rate (per 1,000)	1981	11.4	39.2	22.9	-22.7	37.0 <sup>4</sup>	..	12.6
	1986	2.6	6.0	11.5	31.5	-1.7 <sup>4</sup>	..	11.4
	1991	-1.2	15.9	25.3	41.4	38.9 <sup>4</sup>	..	11.4
	1996	4.2	16.5	22.9	20.0	1.5	16.7	10.4
	1997 (PD)	2.6	21.5	15.5	-6.5	-5.3	13.1	9.8
	1998 (PR)	2.8	22.9	6.5	-27.2	-12.3	18.2	8.0
	1999 (PR)	-2.2	15.8	8.4	-12.0	1.9	17.5	8.6
	2000 (PR)	-4.5	18.2	6.8	-18.5	-1.7	20.6	9.0

See notes at the end of this table.

**Summary Table. Rates and Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2000 - Continued**

	Year	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.
Population Aged 65 + as a Percentage of the Total Population	1981	7.7	12.1	10.9	10.0	8.8	9.9	11.8
	1986	8.7	12.6	11.8	11.0	9.8	10.7	12.4
	1991	9.6	13.1	12.5	12.0	11.1	11.6	13.3
	1996	10.7	12.9	12.9	12.5	12.0	12.2	13.5
	1997 (PD)	11.0	12.9	13.0	12.7	12.2	12.3	13.6
	1998 (PR)	11.3	13.1	13.1	12.9	12.4	12.4	13.6
	1999 (PR)	11.5	13.1	13.2	12.9	12.6	12.5	13.6
	2000 (PR)	11.7	13.2	13.3	13.0	12.8	12.6	13.6
Total Age Dependency Ratio (in percentage)	1981	78.2	76.0	67.0	69.5	55.9	58.9	67.7
	1986	68.1	68.6	61.1	62.5	52.2	55.0	64.0
	1991	59.7	67.3	59.1	59.7	53.5	55.5	65.5
	1996	54.3	63.5	57.7	56.5	54.2	57.4	65.2
	1997 (PD)	53.3	62.5	57.2	56.0	53.9	57.3	64.9
	1998 (PR)	52.5	61.9	56.6	55.4	53.5	57.1	64.6
	1999 (PR)	51.6	60.9	55.8	54.6	52.9	56.7	64.0
	2000 (PR)	50.6	59.9	55.3	54.0	52.5	56.2	63.4
Life Expectancy at Birth (in years) <sup>2</sup>	1981 M	72.1	72.9	71.0	71.1	71.2	72.4	72.3
	1981 F	78.8	80.5	78.6	79.1	78.9	79.2	78.9
	1986 M	72.8	72.8	72.4	72.7	72.2	73.8	73.2
	1986 F	79.2	..	79.5	80.1	79.7	80.0	79.9
	1991 M	73.7	73.2	73.7	74.2	73.8	75.0	74.6
	1991 F	79.5	..	80.3	80.9	80.9	80.9	80.7
	1996 M	74.4	74.6	74.8	74.8	74.6	75.9	75.1
	1996 F	80.2	81.4	80.6	81.2	81.0	81.3	80.5
	1997 M	74.6	75.0	75.0	75.0	74.9	76.3	75.3
	1997 F	80.0	..	80.5	81.1	81.2	81.4	80.6
	1998 M	74.7	75.6	75.3	75.0	75.1	76.6	75.3
	1998 F	80.0	..	80.8	81.3	81.3	81.6	80.7
	1999 M (P)	75.1	75.5	75.6	75.0	75.4	76.9	75.2
	1999 F (P)	80.2	..	81.3	81.5	81.5	81.8	80.8
Infant Mortality Rate (per 1,000)	1981	10.7	13.2	11.5	10.9	8.5	8.8	11.9
	1986	8.5	6.7	8.4	8.3	7.1	7.2	9.2
	1991	7.8	6.9	5.7	6.1	5.9	6.3	6.4
	1996	6.6	4.7	5.6	4.9	4.6	5.7	6.7
	1997	5.2	4.4	4.4	5.7	5.6	5.5	7.5
	1998	6.2	8.0	4.6	6.5	5.6	5.0	6.7
	1999	4.9	6.6	4.0	5.0	4.9	5.4	8.4
Abortion Rate (per 100 births) <sup>3</sup>	1981	3.9	0.3	14.1	4.1	9.5	25.0	10.0
	1986	3.6	..	14.1	3.3	14.7	20.2	15.9
	1991	6.0	..	15.1	6.2	15.1	20.7	15.2
	1996	9.1	..	17.8	7.7	22.6	21.1	21.5
	1997	9.6	..	19.5	8.1	24.0	19.9	23.2
	1998	6.6	..	20.4	8.7	25.6	18.1	22.3
	1999	6.4	..	18.7	7.8	23.9	..	22.9

See notes at the end of this table.



**Summary Table. Rates and Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2000 - Concluded**

	Year	Sask.	Alta	B.C.	Yuk.	N.W.T.	Nun.	Can.
Population Aged 65 + as a Percentage of the Total Population	1981	11.9	7.2	10.7	3.3	3.0 <sup>4</sup>	..	9.6
	1986	12.6	8.0	11.9	3.7	2.9 <sup>4</sup>	..	10.5
	1991	14.1	9.0	12.7	3.9	3.1	1.9	11.5
	1996	14.5	9.8	12.5	4.4	3.5	2.1	12.1
	1997 (PD)	14.5	9.8	12.6	4.6	3.7	2.3	12.2
	1998 (PR)	14.5	9.9	12.8	4.9	3.9	2.4	12.3
	1999 (PR)	14.5	10.0	12.9	5.2	4.0	2.5	12.4
	2000 (PR)	14.5	10.1	13.0	5.5	4.1	2.6	12.5
Total Age Dependency Ratio (in percentage)	1981	73.3	57.4	58.6	53.4	77.9 <sup>4</sup>	..	59.8
	1986	70.7	56.2	57.4	50.3	69.0 <sup>4</sup>	..	56.3
	1991	73.8	58.1	57.7	47.5	56.2	86.0	56.8
	1996	72.5	57.7	55.9	47.2	56.9	84.2	57.1
	1997 (PD)	71.6	57.1	55.5	47.4	56.7	85.5	56.8
	1998 (PR)	70.7	56.4	55.2	47.1	56.6	85.3	56.5
	1999 (PR)	69.6	55.6	54.7	46.8	56.4	84.5	55.9
	2000 (PR)	68.8	54.8	54.1	46.2	56.0	84.2	55.4
Life Expectancy at Birth (in years) <sup>2</sup>	1981	M	72.5	72.2	72.8	..	..	72.0
		F	79.9	79.3	79.8	..	..	79.2
	1986	M	73.8	73.7	74.4	..	..	73.3
		F	80.5	80.2	80.7	..	..	80.0
	1991	M	75.2	75.1	75.3	..	..	74.6
		F	81.5	81.2	81.4	..	..	81.0
	1996	M	75.3	75.9	76.2	..	..	75.4
		F	81.4	81.3	81.8	..	..	81.2
	1997	M	75.5	76.2	76.5	..	..	75.8
		F	81.4	81.5	82.0	..	..	81.3
	1998	M	75.6	76.5	76.9	..	..	76.0
		F	81.6	81.7	82.2	..	..	81.5
	1999	M (P)	75.5	76.6	77.3	..	..	76.3
		F (P)	81.7	81.9	82.5	..	..	81.7
Infant Mortality Rate (per 1,000)	1981	11.8	10.6	10.2	14.9	21.5 <sup>4</sup>	..	9.6
	1986	9.0	9.0	8.5	24.8	12.0	26.6	7.9
	1991	8.2	6.7	6.5	10.6	7.7	18.0	6.4
	1996	8.4	6.2	5.1	0.0	4.9	20.1	5.6
	1997	8.9	4.8	4.7	8.4	6.9	14.8	5.5
	1998	7.1	4.8	4.2	5.1	17.6	19.5	5.3
	1999	6.3	5.8	3.8	2.6	16.7	10.9	5.3
Abortion Rate (per 100 births) <sup>3</sup>	1981	9.5	15.8	30.8	20.9	10.8 <sup>4</sup>	..	17.6
	1986	5.5	14.4	27.3	22.8	12.1 <sup>4</sup>	..	17.1
	1991	8.1	14.9	23.7	27.5	17.7 <sup>4</sup>	..	17.5
	1996	13.6	15.8	24.3	38.1	16.2 <sup>4</sup>	..	20.4
	1997	14.0	17.3	24.9	28.3	16.8 <sup>4</sup>	..	20.6
	1998	13.9	16.2	23.9	36.6	18.5 <sup>4</sup>	..	19.9 <sup>5</sup>
	1999	13.5	15.7	23.2	29.2	38.8	13.0	12.3 <sup>5</sup>

<sup>1</sup> Ratio between population aged 0-17, 65+ and 18-64.

<sup>2</sup> Because of an absence of deaths in certain age groups, the mortality table could not be calculated.

<sup>3</sup> Practised in hospitals in Canada.

<sup>4</sup> Nunavut included.

<sup>5</sup> For 1999, therapeutic abortions performed in Ontario have been excluded due to incomplete reporting. However, abortions performed on Ontario residents in other provinces are included.

(P) Preliminary.

(PD) Final postcensal estimates, (PR) Updated postcensal estimates, based on 1996 as of January 21, 2002.

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Population Estimates Section.

## BIRTHS AND FERTILITY

In 1999, there were 337,249 births in Canada, some 5,200 less than in the previous year (Table A6, appended). *The number of births thus fell for the ninth consecutive year.* Compared with 1990, when the number of births peaked at 404,669, this was a decrease of 67,400. To illustrate the magnitude of the decrease, these 67,400 fewer births represent 20% of the births for the year and slightly more than the total number of births registered in the three Prairie provinces.

The total fertility rate represents the average number of children that a woman would have had if, throughout her reproductive life, she had the fertility observed in a given year. It too has been declining from year to year since 1990. For those wishing to follow the demographic situation, the change in this rate is a better indicator than the change in the number of births, since birth levels may vary as a result of changes in either the size of the population or its age distribution.

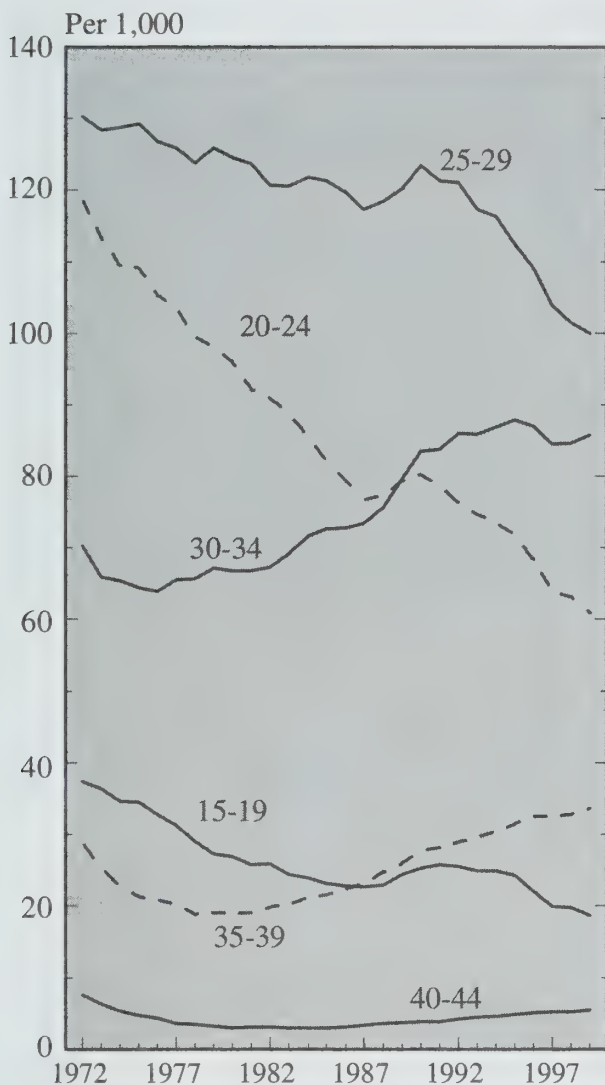
*The total fertility rate declined 1.3% in 1999 to 1.52 children per woman.* The decreases in this rate since 1997 are small—only about 1% per year—but it should be kept in mind that in 1997 the rate fell to an all-time low. Therefore, each new drop in the total fertility rate marks a new historic low.

The number of births fell in almost all provinces. Only Newfoundland and Labrador, Prince Edward Island and Alberta registered increases in births, and none of these gains was statistically significant. In the case of the two Atlantic provinces, the increase in births was also reflected in the total fertility rate, but this was not the case in Alberta, where fertility was down slightly. In Newfoundland and Labrador, the total fertility rate was up 4%, the strongest increase in Canada and the first recorded in that province since 1991. Apart from Newfoundland and Labrador, only Prince Edward Island and Nova Scotia showed gains in fertility, but neither was statistically significant.

The sharpest decreases in births were recorded in New Brunswick (-3.4%), Quebec (-3.0%) and British Columbia (-2.6%), whereas in the other provinces the decrease was smaller than in Canada as a whole (-1.5%) and was significant only for Ontario and Saskatchewan. The former three provinces also recorded the largest declines in the total fertility rate, with decreases of -2.1% in New Brunswick and British Columbia and -1.4% in Quebec.

In Alberta, the increase in the number of births is entirely attributable to population changes—in particular the strong population growth that the province is experiencing—since the total fertility rate actually declined (-0.6%). In Manitoba and Saskatchewan, unlike in the other Prairie province,

**Figure 1. Fertility Rate by Age Group, Canada, 1972-1999**



**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section.

the number of births fell but fertility remained stable. Thus, the total rate in these two provinces—the most fertile provinces in Canada—held steady at 1.81.

### Rates by Age

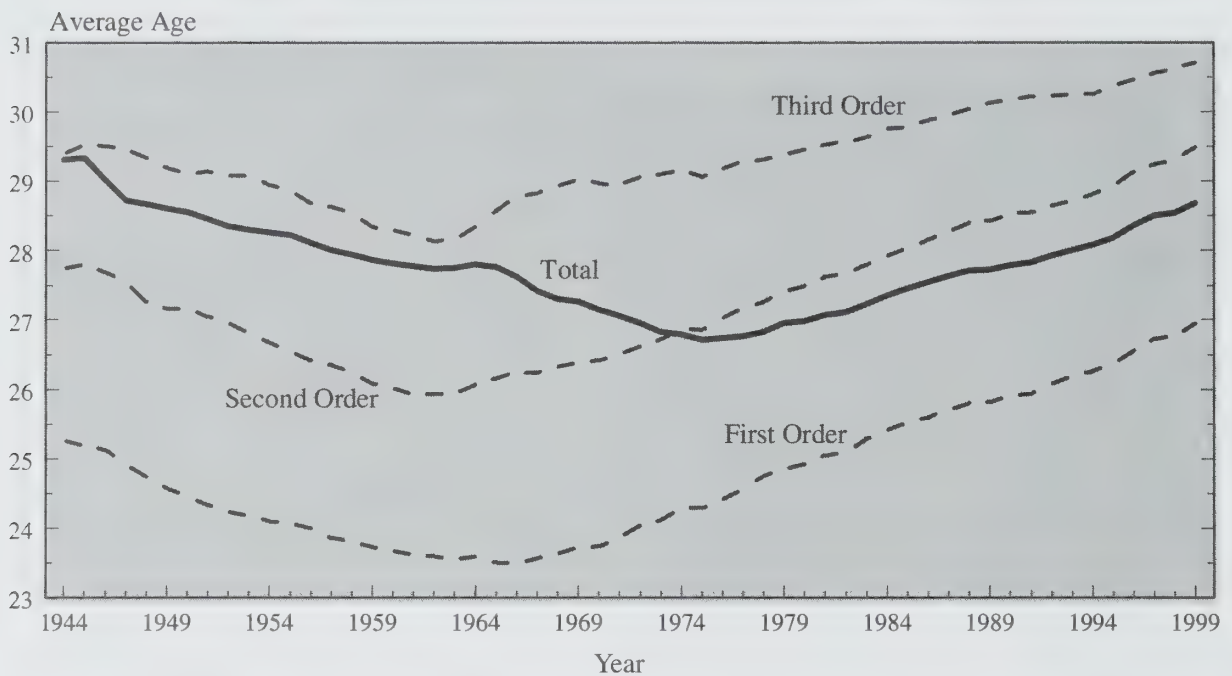
Fertility rates continue to decline for all age groups under age 30 and to increase for higher ages (Figure 1). The fall in fertility rates is especially marked among women aged 20 to 24, whose fertility is, on average, only half what their mothers' was when they were the same age. Except for a short period at the end of the 1980s, the fertility rate of women in this age group has been on a steep downward slope since the early 1970s and does not yet show any sign of levelling off. The fertility of women aged 25 to 29 has also been falling rapidly since the late 1980s. Whereas in 1972 it stood at 130 per 1,000, by 1999 it was only 100 per 1,000.

The decline in fertility among young women is accompanied by a rise in fertility among older women. The fertility rate for women aged 30-34 has been rising since 1976, when it was 64 per 1,000. In 1999, it reached 86 per 1,000. However, the upward trend in the fertility rate of women in this age group appears to be tapering off. Between 1980 and 1990, it went from 67 per 1,000 to 84 per 1,000, an increase of 25%. By comparison, the rate of 86 per 1,000 registered in 1999 represents an increase of only 3% over 1990. On the other hand, the increase in the fertility of women aged 35 to 39 has been nearly steady since the early 1980s. However, it should be kept in mind that fertility in this age group is relatively low (34 per 1,000 in 1999).

Clearly, then, some childbearing is being postponed to later in life. And while a number of the births that young women seem increasingly inclined to postpone actually occur later in their lives, this is not always the case.



**Figure 2. Average Age at Maternity by Birth Order, Canada, 1944-1999**



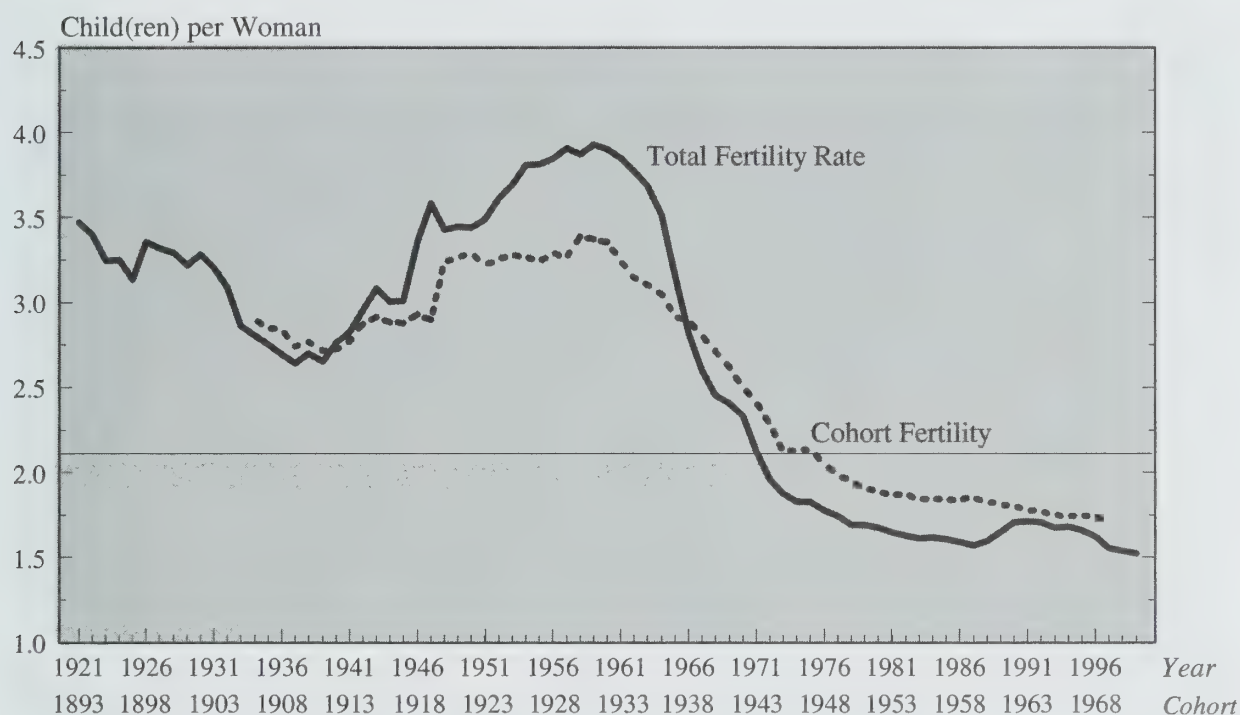
**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section.

### Average Age at Maternity

The fertility tempo is continuing to slow down, a trend that began in the mid-1970s. Mothers' age at the birth of their children is increasing. Figure 2 shows the change over time in the average age of mothers at the birth of their children by birth order. Between the end of World War II and the mid-1970s, the average age at maternity fell steadily, from approximately 29.5 years in 1944 to less than 27 years in 1976. Part of the high birth rate of the baby-boom is attributable to this acceleration of the tempo, with young women having children earlier than those who went before them. The earlier cohorts had cut back their fertility during the 1930s and 1940s, years marked by the Great Depression and the war effort. Starting in the mid-1970s, the average age at maternity increased gradually but steadily, reaching 28.7 years in 1999.

But during the 1960s, fertility rapidly declined (Figure 3). In just over ten years, the total fertility rate fell from a peak of nearly four children per woman to approximately two children per woman. This drop in fertility was characterized by a decrease in higher-order births, which on average tend to occur at an older age. It follows that part of the lowering of the average age at maternity is attributable to the growing proportion of first and second births. This explains why the average age at maternity for all birth orders combined fell until 1974, whereas the average ages for each order (first, second and

**Figure 3. Total Fertility Rate, 1921-1999 and Completed Fertility, 1893-1971, Canada**



**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section.

third) were all on the rise starting in 1964. This apparent paradox is, in fact, attributable only to the increasing weight of first and second births over time at the expense of higher-order births.

There is therefore an interaction between age at maternity and fertility level as measured by the total fertility rate. Just as the acceleration of the fertility tempo partly explains the high level of the total fertility rate during the baby-boom, part of the current weakness of the rate could be related to the slowing of the tempo. An increase in age at maternity is tending to reduce the period rate because the births that the successive cohorts of women will ultimately have are distributed over a longer period.

Recently, two demographers<sup>1</sup> proposed a simple method for “correcting” the period rate for the distortion created by changes in the fertility tempo. This correction is based on the annual change in the average age in the fertility tempo by birth order. According to these authors, the level of the proposed rate represents the level of the total fertility rate that would have been observed had there been no change in the tempo.

<sup>1</sup> Bongaarts and Feeney (1998). “On the Tempo and Quantum of Fertility”, *Population and Development Review*, 24(2): 271-291.

**Figure 4. Total Fertility Rate Corrected and Uncorrected for the Tempo Effect, Canada, 1980-1998**



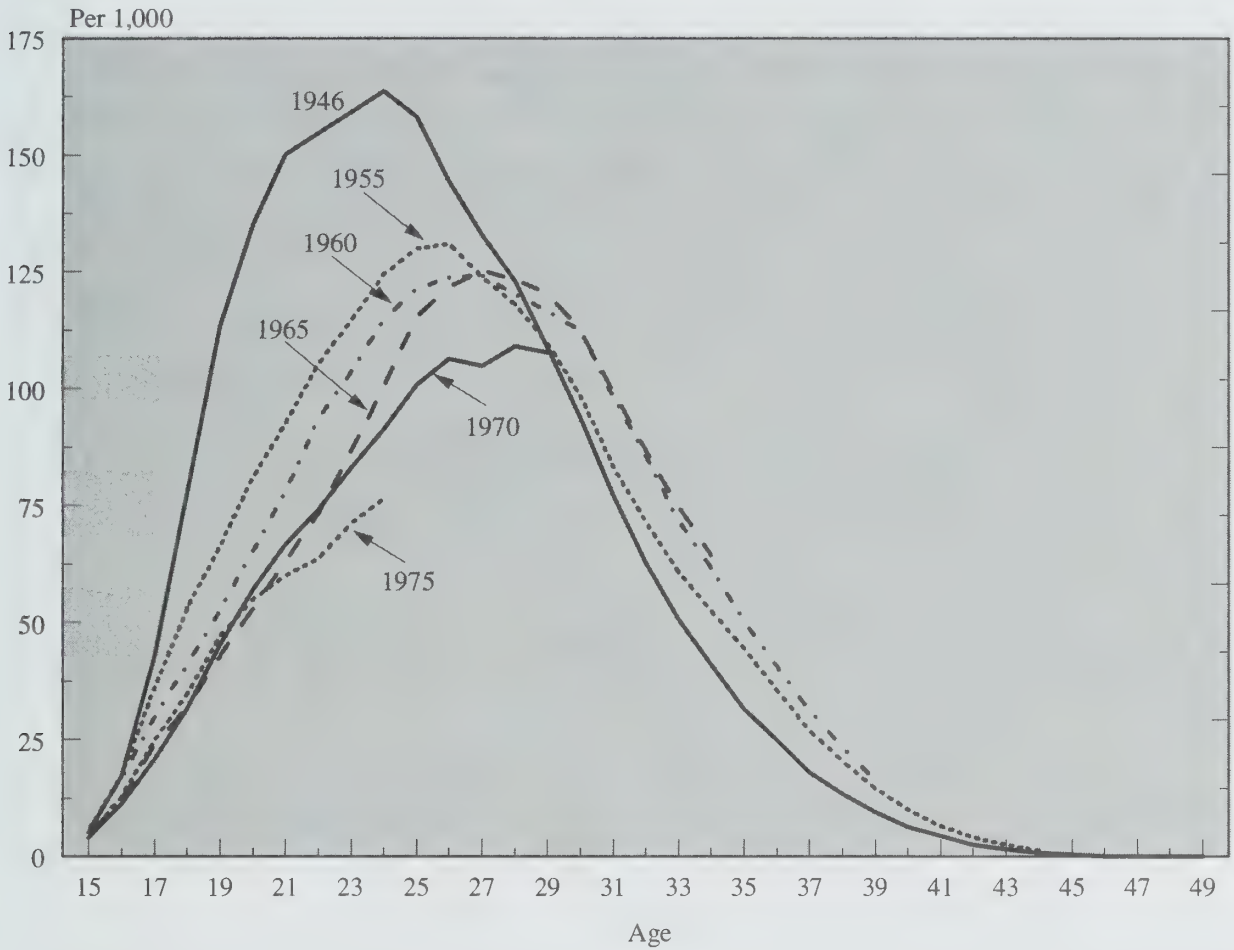
**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section.

Figure 4 compares the change in the observed total fertility rate and the “corrected” rate for the period 1980-1998. As expected in light of the slowing of the fertility tempo, the corrected rate is higher than the observed rate throughout the period. The average of the observed rates is 1.64 children per woman and the correction is 0.17 children per woman, which means that without the change in the tempo, the fertility of Canadian women would have been estimated at 1.81 children on average during this period. While the corrected rate is consistently higher than the observed rate throughout the period, the gap between the two rates varies from year to year. The correction tends to be greater when the decrease in fertility is sizable, indicating that a portion of these annual changes does indeed result from a change in the tempo.<sup>2</sup> The largest gaps between the two rates occur in the years in which the total rate is down sharply from the year before. The correction was at its maximum during the period 1992-1997, when the total fertility rate went from 1.71 children per woman to 1.54 children per woman, and was at its minimum in the period 1987-1991, when fertility rose from 1.58 to 1.71 children per woman.

<sup>2</sup> The correlation between the annual change in the total fertility rate and the correction made by this method is -0.49.



**Figure 5. Fertility Rate by Age for Selected Cohorts, Canada**



**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section.

### Change in Fertility Rates by Age Within Cohorts

Because the change in the fertility tempo has such a substantial effect on the period rate, it is useful to pay greater attention to the change in fertility within cohorts. Figure 5 shows fertility rates by the age of the mother for selected cohorts, separated by five-year intervals. An exception is the 1946 cohort, which has been included in the chart to illustrate the fertility of a cohort that for all practical purposes replaced itself. The 1946 cohort had a completed fertility rate of 2.13 children per woman, quite close to the level needed to replace, on average, each woman in the mother cohort by one in the daughter cohort, taking the prevailing death rate into account. In the case of older women, each curve in Figure 5 represents the fertility rates of a cohort for its entire reproductive period. For younger women, the curve represents the fertility rate up to the age reached in 1999, the most recent year for which the relevant data are available.

Except for the curve for the 1970 cohort, the curves are similar in shape, with fertility rates rising rapidly from age 15 to the modal age, then declining

less rapidly. The 1970 cohort stands out by the fact that starting at age 26, the modal age for the most recent cohorts, the fertility rate of this cohort reaches a plateau and fertility remains at the maximum level (approximately 100 per 1,000) for a few years. In fact, at age 29 (in 1999), the fertility of this cohort has perhaps not yet started to decline. It should be noted that the peak of the fertility curve for the 1970 cohort, at 109 per 1,000, is much lower than that of the cohorts from 1955 to 1965 (nearly 125 per 1,000).

The slowing of the fertility tempo described above using the period rate is also seen in subsequent cohorts. From one cohort to the next, fertility prior to age 30 declines—rapidly at first, as may be seen from the large gap between the curves representing the fertility of the 1946 and 1955 cohorts, and then more slowly. After age 30, the fertility rates of the successive cohorts are on the rise for all cohorts, except for the 1965 cohort, for which the rates after age 30 are similar to those for the 1960 cohort. This corresponds to the slowing in the rise of fertility rates for women aged 30 to 34 that may be observed after 1990 in Figure 1.

The rise in fertility after age 30 is associated with women having the births that they postponed when they were younger. The juxtaposition of fertility rates after age 30 for the 1960 and 1965 cohorts is an indication that this catching-up process might have reached its limits. It may also be noted that fertility rates prior to age 23 in the 1970 cohort are practically indistinguishable from those for the 1965 cohort, which might suggest that fertility is stabilizing. On the other hand, between 23 and 29 years of age, the 1970 cohort exhibits considerably lower rates than those of the cohort five years ahead of it. Since the latter rates were themselves historically low, this instead suggests that the decline in fertility is continuing. The low fertility of the 1975 cohort between ages 20 and 24 points in the same direction. Since the area under each of the curves represents the completed fertility rate of the corresponding cohort, it appears that the completed fertility rate might well continue to decline for the most recent cohorts, because the cumulated fertility rate at age 30 for the women of the 1970 cohort, namely 1.0 child, is 10% lower than that of the 1965 cohort. Similarly, while it is somewhat early to draw conclusions, the cumulated fertility rate at age 25 for the 1975 cohort is 7% lower than that of the 1970 cohort.

### **Completed Fertility Rate of Recent Cohorts**

The level of the total fertility rate may vary from year to year because of conditions that affect fertility either positively or negatively. And as seen above, changes in the fertility tempo may also cause it to rise or fall. In both cases, the average number of children that the women of a cohort will ultimately bring into the world—the completed fertility rate—might not be affected.

This latter indicator therefore has an advantage over the total fertility rate in that it is much less influenced by period effects. Unfortunately, it is necessary to wait until the women of each cohort have reached the end of their reproductive life at age 50 before the completed fertility rate can be calculated. But as was seen in Figure 5, the fertility rate after age 30 of women born in 1965 is, for all practical purposes, identical to that of women born five years earlier. Furthermore, most of the childbearing that contributes to the completed fertility rate has already been completed by age 30. We may therefore, without risk of being greatly in error as to the level of the completed fertility rate that these women will actually attain, project it by extrapolating the observed change in fertility rates after age 30.

Figure 3 compares the change in the total fertility rate to the change in the completed fertility rate. Since the average age at maternity is 28, the curve representing the completed fertility rate is shifted by 28 years in order to better correspond to the period rate. Despite this, it may be seen that the match between the two indicators is not perfect. During the baby-boom, the total fertility rate was swelled by the acceleration of the tempo. No cohort shown in Figure 3 will have had a completed fertility rate exceeding 3.5 children per woman, whereas the total fertility rate approaches 4.0 children per woman for nearly 10 years. By contrast, since the mid-1960s, the completed fertility rate of the corresponding cohorts has exceeded the total fertility rate.

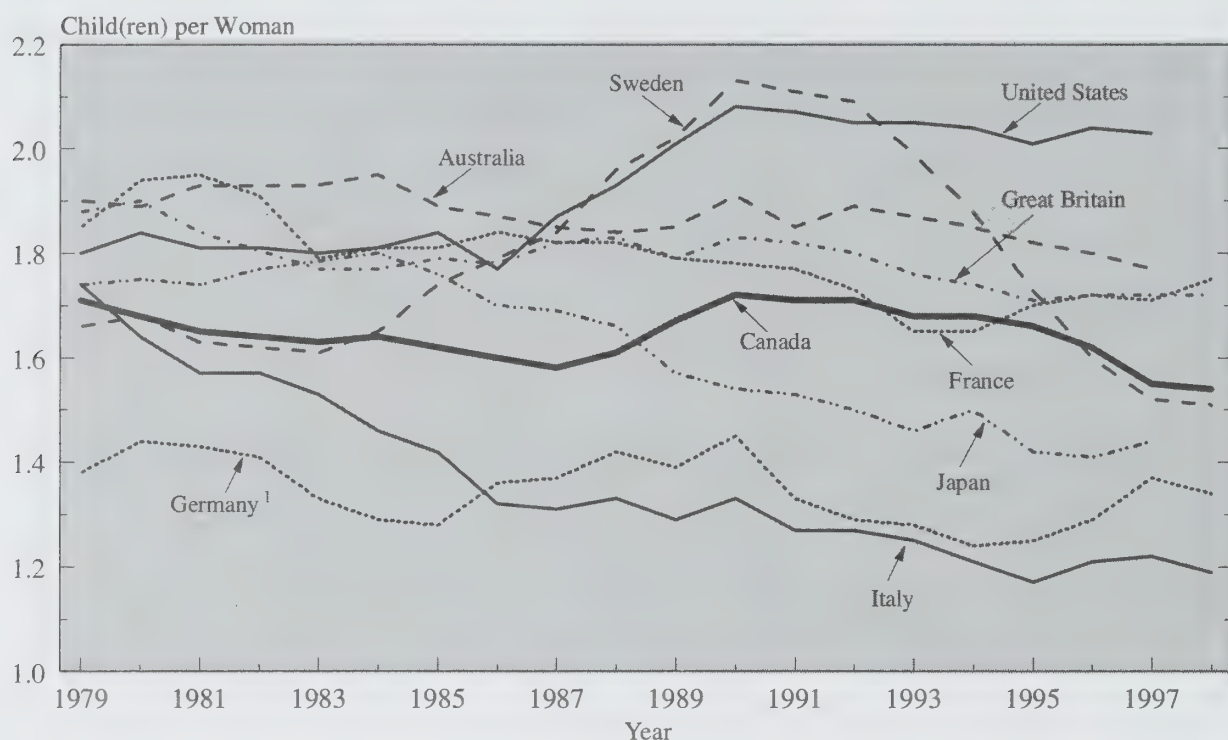
It appears that none of the baby-boom cohorts will replace itself. The completed fertility rate of the 1946 cohort almost reaches the replacement level, and the number of children per woman then declines from one cohort to the next. The 1950 cohort, the most recent to have reached age 50 and thus completed its reproductive period, had a completed fertility rate of 1.95 children. Fertility rates after age 40 are very low, and it is fairly safe to predict that the completed fertility rate of women born in 1960 will reach 1.83 children. Similarly, the completed fertility rate of the 1969 cohort, which was 30 years of age in 1999, will reach 1.72 children per women if the upward trend in fertility beyond the thirtieth birthday continues, or 1.67 children per woman if fertility stabilizes at the level observed in 1999.

### **The Total Fertility Rate in Industrialized Countries**

Canada is not the only industrialized country in which the total fertility rate is declining, as shown in Figure 6. Compared with other industrialized countries, Italy experienced a later but more rapid decline in fertility, and this has continued at lower levels than those observed either here or in Western and Northern Europe. Italy's rate reached a minimum of 1.2 children per woman in 1995. Other Mediterranean countries are also showing sharply falling rates: in Spain, fertility fell from 2.5 children per woman in 1978 to 1.2 children per woman in 1996; in Greece, the rate fell from 2.3 to 1.3 and in Portugal, from 2.3 to 1.4 during the same period.



**Figure 6. Total Fertility Rate for Selected Industrialized Countries, 1979-1998**



<sup>1</sup> West Germany before 1990.

**Sources:** Monnier, A. "La conjoncture démographique: l'Europe et les pays développés d'outre-mer", *Population*, various annual publications and Statistics Canada, Demography Division.

The level of 1.2 children per woman has also been observed in the Czech Republic (1996). Perhaps the most spectacular drop in fertility has occurred in East Germany. Already low, that country's fertility rate collapsed following unification with West Germany and hovered around 0.8 children per woman between 1992 and 1995, thus pulling down the overall German level, which also approached 1.2 children per woman in the mid-1990s. The German fertility rate is now approaching 1.4 children per woman, the level that prevailed in West Germany before reunification.

Lastly, Japan is another industrialized which, like Canada, has a low fertility rate that continues to decline. At the start of the 1980s, fertility in Japan appeared to have stabilized at between 1.7 and 1.8 children per woman, which is slightly higher than the rate then observed in Canada. Since the mid-1980s, however, fertility has been declining almost continuously in Japan. It now stands at around 1.4 children per woman.

Other industrialized countries have higher fertility rates than those observed in Canada: the United States (2.1 children per woman in 2000), the United Kingdom (1.7 children per woman in 1998), Australia (1.8 children per woman

in 1997) and France (1.9 children per woman in 2000). The fertility of American women stands out from that observed in other industrialized countries, in that it alone has stayed at or exceeded the replacement level over a long period. Until the mid-1980s, fertility in the United States appeared to have stabilized at approximately 1.8 children per woman, but from 1987 to 1990, it showed a sizable increase that brought the period rate up to 2.0 children per woman, just under the replacement level. That rate, which is high in comparison with those observed in the other industrialized countries, has been maintained for a decade now. The other Anglo-Saxon countries, the United Kingdom and Australia, also show higher fertility levels than the other industrialized countries, with rates holding steady at around 1.7 or 1.8 children per woman during the past twenty years.

Sweden too experienced an increase in its total fertility rate comparable to the one observed in the United States. But unlike the U.S. increase, Sweden's was short-lived. Starting in 1992, Swedish women's fertility rate fell sharply. Like the Canadian rate, it now stands at approximately 1.5 children per woman, slightly below what it was before the increase.

Except for a short two-year period in 1993 and 1994, France's total fertility rate has been higher than Canada's. After bottoming out at 1.7 children per woman in 1994, the French rate has rebounded. Preliminary data indicate a rate of 1.9 children per woman in 2000.

## MORTALITY

Since the 2000 Report was published, Vital Statistics has released data on deaths for 1998 and 1999. *In 1998, 218,100 deaths were registered in Canada. This was 2,400 more than in 1997, an increase of more than 1% (Table A9, appended). In 1999, the number of deaths rose again to 219,487, up 1,400 from 1998. This was a smaller increase (0.6%).* Such successive increases do not seem abnormal, and they are likely to continue, since the Canadian population is continuing to grow and its age structure is shifting upward: there is a steady increase in both the number and the proportion of elderly persons.

*The age distribution of deaths also shows that the majority of additional deaths registered in 1998 and 1999, namely 61% and 64% respectively, occurred at an age equal to or greater than 85.* Deaths occurring between 90 and 99 years of age have doubled since 1981, and deaths of centenarians have more than tripled (Table 3). In all, the deaths of individuals aged 90 or over now account for nearly 12% of all deaths. The corresponding proportion in 1981 was 7%.

Conversely, 400 fewer deaths were registered in 1998 than in 1997 within the population under 20 years of age, and the trend was the same between

**Table 3. Number of Deaths of Persons Aged 90 or Over, Canada, 1981-1999**

Year	90-99	100 and Over	90 and Over	Total Deaths	Percentage of Total Deaths
1981	11,997	404	12,401	170,980	<b>7.3</b>
1982	12,927	505	13,432	174,238	7.7
1983	13,023	552	13,575	174,465	7.8
1984	13,922	639	14,561	175,682	8.3
1985	14,056	676	14,732	181,319	8.1
1986	14,689	741	15,430	184,218	8.4
1987	15,906	825	16,731	184,915	9.0
1988	16,069	880	16,949	189,980	8.9
1989	16,474	970	17,444	190,956	9.1
1990	17,266	1,033	18,299	191,956	9.5
1991	17,375	1,065	18,440	195,548	9.4
1992	17,858	1,115	18,973	196,524	9.7
1993	18,902	1,159	20,061	204,909	9.8
1994	19,007	1,215	20,222	207,066	9.8
1995	20,260	1,332	21,592	210,706	10.2
1996	21,216	1,399	22,615	212,876	10.6
1997	22,178	1,294	23,472	215,639	10.9
1998	23,255	1,389	24,644	218,088	11.3
1999	24,404	<b>1,434</b>	25,838	219,464	<b>11.8</b>

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section and Research and Analysis Section.



1998 and 1999. Also, deaths of children under one year of age are decreasing (Table A9, appended). This trend may be explained by declining infant mortality (Summary Table), combined with fewer births.

### **Life Expectancy at Birth**

While the number of deaths is increasing from year to year because of population growth and the aging of the population, mortality is continuing to weaken. *In 1999, life expectancy at birth reached 81.7 years for females and 76.3 years for males* (Table A10, appended). This was a gain of 0.4 years for females and 0.5 years for males compared with the figures for 1997. Life expectancy at birth grew by 0.2 years for females and 0.3 years for males between 1998 and 1999. In general, life expectancy gains have been on the rise since 1994.

According to the most recent data available for other developed countries, Canadian males enjoy one of the world's longest life expectancies at birth, with only Japanese, Swedish, Swiss and Icelandic males ahead of them (Table 4). Canadian females, for their part, rank behind only Japanese, French, Swedish, Swiss, Spanish and Italian females. The gap with our neighbours to the south is essentially stable in the case of females but has been shrinking in the past few years in the case of males. In 1997, the life expectancy of Canadian females exceeded that of American females by 2.1 years, while for males the difference was 2.2 years in favour of Canadians.

The life expectancy gains for males continue to exceed those for females, although the gap has narrowed recently. The difference in life expectancy at birth between males and females has been shrinking from year to year since the late 1970s. In 1999, it was 5.4 years in favour of females, two years less than the maximum of 7.5 years reached in 1978. *However, it is interesting to note that males' life expectancy at birth in 1999 (76.3 years) had not yet reached the level already observed for females back in 1971 (76.6 years), almost thirty years earlier.*

A breakdown of annual life expectancy gains by major age group shows the relative impact of the decline in mortality in each age group on gains in life expectancy at birth. The results of this breakdown are shown in Figure 7 for the age groups 0-19, 20-64 and 65 and over. As may be seen, for both males and females, recent upward or downward variations in life expectancy at birth are closely linked to those for mortality after age 65: the curve representing total gains is similar in shape to the curve for the latter age group, especially in the early 1990s. A sizable proportion of the major gains achieved in the late 1980s and at the start of the 1990s is due to the decline in mortality after age 65, especially for females. Similarly, the abrupt slowing in the rate of growth of life expectancy at birth during the first half of the 1990s largely resulted from the slowing of the decline in mortality among elderly persons during that period.

**Table 4. Life Expectancy at Birth for Selected Industrialized Countries, 1978-1997**

Year	Germany <sup>1</sup>	Australia	United States	France	Italy	Japan	Great Britain	Sweden	Canada
Males									
1978	69.4	..	69.5	69.9	..	73.2	..	72.4	..
1979	69.6	..	70.0	70.1	..	73.1	..	72.5	..
1980	69.9	71.0	70.0	70.2	70.6	73.4	70.5	73.8	71.7
1981	70.2	71.4	70.4	70.4	71.1	73.8	70.8	73.1	72.0
1982	70.5	71.2	70.9	70.7	71.3	74.1	71.1	73.4	72.4
1983	70.8	72.1	71.0	70.7	71.4	74.3	71.4	73.6	72.7
1984	71.2	72.6	71.2	71.3	71.6	74.7	71.6	73.8	72.9
1985	71.5	72.4	71.1	71.3	..	74.8	71.7	74.8	73.1
1986	71.8	72.8	71.3	71.5	..	75.4	71.9	74.0	73.3
1987	71.5	73.0	71.5	72.0	72.6	75.6	72.2	74.2	73.5
1988	72.2	73.1	71.5	72.4	73.2	75.8	72.4	74.2	73.7
1989	72.6	73.3	71.8	72.5	73.5	75.9	72.7	74.8	74.0
1990	72.0	73.9	71.8	72.7	73.6	75.9	72.9	74.8	74.3
1991	72.1	74.4	72.0	72.9	73.6	76.1	73.2	74.9	74.6
1992	72.6	74.5	72.3	73.2	74.0	76.1	73.6	75.4	74.7
1993	72.7	75.0	72.2	73.3	74.4	76.3	73.6	75.5	74.9
1994	73.0	75.2	72.4	73.7	74.7	76.6	74.2	76.1	75.0
1995	73.3	75.2	72.5	73.9	74.9	..	74.0	76.2	75.2
1996	73.6	..	73.1	74.2	74.9	..	74.3	76.5	75.4
1997	..	..	73.6	74.6	..	..	..	..	75.8
Females									
1978	76.1	..	77.2	78.0	..	78.5	..	78.6	..
1979	76.4	..	77.8	78.3	..	78.5	..	78.7	..
1980	76.6	78.1	77.4	78.4	77.4	78.7	76.6	79.7	78.9
1981	76.8	78.4	77.9	78.5	..	79.2	76.8	79.1	79.2
1982	77.1	78.2	78.1	78.9	..	79.7	77.0	79.4	79.4
1983	77.5	78.7	78.1	78.8	78.1	79.9	77.2	79.6	79.6
1984	77.8	79.1	78.2	79.4	78.1	80.4	77.3	79.9	79.8
1985	78.1	78.8	78.2	79.4	..	80.5	77.4	80.4	79.9
1986	78.4	79.1	78.3	79.6	..	81.3	77.6	80.0	80.0
1987	78.1	79.5	78.4	80.3	79.2	81.4	77.9	80.2	80.2
1988	78.7	79.5	78.3	80.5	79.7	81.6	78.0	80.0	80.4
1989	79.0	79.6	78.5	80.7	80.0	81.8	78.3	80.6	80.6
1990	78.4	80.1	78.8	80.9	80.2	81.8	78.5	80.4	80.7
1991	78.7	80.4	78.9	81.1	80.3	82.1	78.8	80.5	81.0
1992	79.2	80.4	79.1	81.4	80.6	82.2	79.0	80.8	81.0
1993	79.2	80.9	78.8	81.4	80.7	82.5	78.9	80.8	81.0
1994	79.5	81.1	79.0	81.8	81.2	83.0	79.4	81.4	81.0
1995	79.7	81.1	78.9	81.9	81.4	..	79.2	81.5	81.1
1996	79.9	..	79.1	82.0	81.3	..	79.5	81.5	81.2
1997	..	..	79.2	82.3	..	..	..	..	81.3

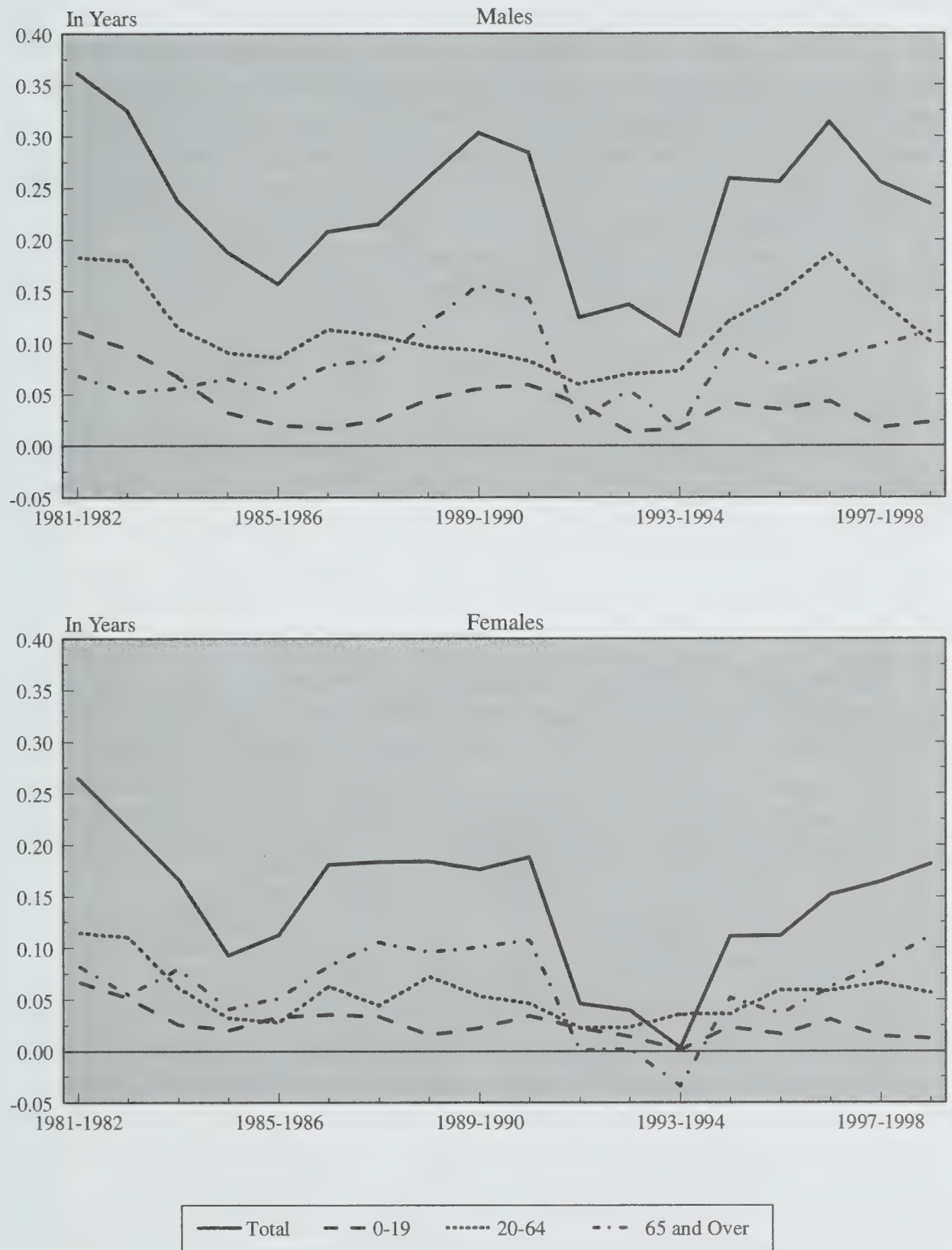
<sup>1</sup> West Germany before 1990.

Sources: Monnier, A. "La conjoncture démographique: L'Europe et les pays développés d'outre-mer", *Population*, various years and Statistics Canada, Demography Division.

## Life Expectancy at 65 and 85 Years of Age

*Life expectancy at age 65 has continued to grow, reaching 16.5 years for males and 20.3 for females in 1999* (Table A10, appended). After slowing substantially in the mid-1990s, growth has recently regained momentum and is now at nearly the levels registered in the late 1980s. Thus in 1999, gains in life expectancy at age 65 were roughly 0.2 years for both males and females.

**Figure 7. Annual Gains in Life Expectancy Broken Down by Major Age Group, Canada, 1981-1999**



**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section and Research and Analysis Section.



Similarly, life expectancy at age 85 has been rising again since 1998, after six years of no change. In 1999, it reached 5.5 years for males and 6.9 years for females.

Gains on death continue. According to the 1981 mortality table, one Canadian male in five (20%) could expect to reach the age of 85, a proportion that climbed to two in five (41%) for females. ***According to mortality conditions observed in 1999, one male in three (30%) and one female in two (49%) could expect to reach his/her 85<sup>th</sup> birthday*** (Table A10, appended). This rapid improvement in survival probabilities leads to a steady increase in the number of elderly persons, seen especially in the population of centenarians. It should nevertheless be kept in mind that while some individuals have been able to reach ages in excess of 110 years (supercentenarians), these are cases of exceptional longevity.

## Causes of Death

In 1999, diseases of the circulatory system were the main cause of death in Canada, with standardized rates of 230.9 and 217.7 per 100,000 for males and females respectively (Table 5). Mortality related to diseases of the circulatory system—including deaths attributable to ischemic heart diseases and those due to cerebro-vascular diseases—continues to fall steadily, while mortality attributable to tumours and cancers remains relatively stable.

The main point to note in Table 5 is how different the trends for males and females are for death attributable to malignant tumours of the respiratory system. While the recent trend is toward stabilization of the death rate for this cause among males, the corresponding rate for females continues to rise. This is clearly linked to recent smoking trends in Canada, with the “young” female cohorts containing a larger proportion of smokers than those that they replace.

## Deaths Attributable to HIV

After the spectacular drop in deaths attributable to HIV between 1996 and 1997, the decline, which began in the mid-1990s, slowed considerably in 1998 and 1999. It is nevertheless worth noting that in 1998, 25% fewer deaths due to HIV were registered among males than in the previous years. Admittedly, this decrease was only half as large as in the previous year, but it was nonetheless significant. Among females, the drop was more modest and is not statistically significant. ***In 1999, 362 deaths were registered among males, only a third as many as four years earlier!*** Among females, the number of HIV-related deaths declined slightly in 1999, but this decrease is not statistically significant. There were 69 deaths among women, 1.5 times less than in 1996. This change is more related to the progress made in treating persons infected by the virus than to a decrease in the prevalence of the disease. The incidence

**Table 5. Evolution of Mortality from Diseases of the Circulatory System and from Tumours, by Sex, Canada, 1971-1999<sup>1</sup>**

Year	Diseases of the Circulatory System <sup>2</sup>	Ischemic Heart Diseases <sup>3</sup>	Cerebro-vascular Diseases <sup>4</sup>	Tumors and Cancers <sup>5</sup>	Malignant Tumors of the Respiratory System <sup>6</sup>
Males					
1971	511.74	346.69	89.66	199.29	55.73
1976	483.42	325.55	79.33	203.39	63.24
1981	411.99	272.00	63.87	209.92	69.44
1982	402.81	264.74	59.66	213.74	73.33
1983	387.30	253.67	56.18	213.11	74.05
1984	370.19	242.32	54.66	217.52	75.60
1985	361.19	236.15	51.80	217.79	73.55
1986	351.83	227.36	50.11	218.55	74.39
1987	333.97	216.33	48.96	217.48	74.15
1988	325.48	210.16	46.80	222.20	76.49
1989	312.07	198.42	47.22	218.56	75.90
1990	288.48	181.90	45.20	216.10	74.84
1991	281.59	176.31	43.43	216.31	73.84
1992	275.35	171.72	42.36	214.14	72.33
1993	276.87	171.67	44.18	212.62	72.30
1994	265.92	163.70	42.77	211.50	70.40
1995	260.37	158.37	42.52	208.91	67.83
1996	253.48	154.15	40.88	206.29	67.25
1997	245.12	147.00	40.75	200.62	64.33
1998	238.69	141.99	38.40	200.88	64.54
1999	230.90	137.39	36.59	199.51	64.54
Females					
1971	471.63	263.90	119.57	167.59	10.08
1976	426.87	239.99	103.36	164.50	14.24
1981	361.41	197.39	82.89	167.81	20.40
1982	356.35	194.77	79.65	168.20	22.34
1983	339.19	183.88	75.20	168.56	22.55
1984	328.23	180.79	71.13	171.59	25.20
1985	319.47	172.65	69.75	174.92	27.04
1986	315.86	170.83	69.03	174.88	27.16
1987	299.24	161.74	64.54	174.17	28.72
1988	293.75	156.76	64.85	176.05	30.64
1989	280.83	148.58	62.82	173.87	30.54
1990	265.75	141.56	58.32	173.78	31.20
1991	261.09	137.91	57.71	174.73	33.43
1992	253.03	130.83	57.64	173.93	33.20
1993	255.25	130.97	59.43	176.83	35.79
1994	249.94	127.23	57.12	176.87	35.92
1995	244.67	123.98	55.90	173.63	35.64
1996	240.22	120.53	55.20	177.35	37.85
1997	234.37	116.82	55.22	170.43	36.65
1998	226.47	111.29	52.28	173.11	39.03
1999	217.70	106.08	49.95	171.61	39.54

<sup>1</sup> Rate per 100,000, standardized on the structure by age and sex of the 1991 population. The rates can't be compared between sexes but the tendencies can.

<sup>2</sup> Causes 390-459, 9th Revision of the I.C.D.

<sup>3</sup> Causes 410-414, 9th Revision of the I.C.D.

<sup>4</sup> Causes 430-438, 9th Revision of the I.C.D.

<sup>5</sup> Causes 140-239, 9th Revision of the I.C.D.

<sup>6</sup> Causes 160-165, 9th Revision of the I.C.D.

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.

of HIV, for example, is declining much less rapidly than the annual number of deaths attributable to it. In 1999, 2,231 new cases of persons infected with HIV were detected in Canada, down 25% from the 2,989 cases reported in 1995<sup>3</sup>.

## Suicide

The actual number of suicides is difficult to estimate precisely, since some violent deaths, such as those caused by road accidents, may in fact be “disguised” suicides. It is therefore likely that in the figures shown, the real situation is somewhat underestimated.

In 1999, 4,074 suicides were registered in Canada, up 8% from the 3,776 suicide deaths registered five years earlier. In order to compare variations over several years, it is preferable to use rates standardized on the 1991 population. According to this indicator, suicide mortality is nearly stable in Canada. However, the Canada-wide trend masks a great disparity that becomes evident when the change over time in each province is examined (Table 6). Suicide deaths declined for both sexes during the 1990s in Ontario and all provinces to the west of it. Since 1970, the situation has especially improved in British Columbia, where the suicide death rate has fallen from 25 to 17 per 100,000 for males and from 11 to 4 per 100,000 for females, thus moving the province from first to seventh place for males and from first to fifth place for females. In Alberta, death by suicide has remained nearly stable throughout the period, and this province now has the highest suicide death rates west of Quebec. The latter province has the highest such rates in Canada, for both males and females. Furthermore, the Quebec rates are on the rise, in contrast with relatively stable or declining rates elsewhere. A major gap with the rest of Canada therefore continued to widen in the period 1995-1999, with the suicide death rate reaching 31 per 100,000 and 8 per 100,00 for male and female Quebecers respectively. For both sexes, the suicide death rate is therefore 50% higher in Quebec than in Canada as a whole. For males in this province, the suicide death rate has almost reached the rate observed in the Northwest Territories and Yukon. Among females, the beginning of a decline in suicide mortality in the early 1990s was not confirmed: the rate rose to 8 per 100,000 during the period 1995-1999, its highest level in 30 years, returning Quebec to the unenviable first-place position that Alberta occupied during the first half of the 1990s.

The situation has remained nearly stable in the Maritime provinces, except in Newfoundland and Labrador, where the suicide death rate has dropped substantially. As in the past three decades, the province of Newfoundland and Labrador has the lowest suicide death rate in Canada. For the three territories

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<sup>3</sup> Health Canada (2000). *Aids and HIV in Canada*., HIV/Aids Epidemiology Update, April 2000, Ottawa, Canada.



**Table 6. Standardized Suicide Death Rates (per 100,000), Canada, Provinces and Territories, 1970-1999**

Province	Rate (Rank)					
	1970-1974	1975-1979	1980-1984	1985-1989	1990-1994	1995-1999
Males						
Newfoundland and Labrador	8.3 ( 9 )	7.5 ( 9 )	10.0 ( 9 )	9.5 ( 9 )	14.8 ( 9 )	11.7 ( 9 )
Prince Edward Island <sup>2</sup>	23.3	26.4	18.6	13.6	21.6	17.0
Nova Scotia	19.5 ( 6 )	20.1 ( 6 )	20.0 ( 7 )	19.5 ( 7 )	19.3 ( 7 )	19.7 ( 5 )
New Brunswick	14.7 ( 8 )	19.7 ( 7 )	22.5 ( 4 )	20.8 ( 4 )	22.0 ( 3 )	23.0 ( 3 )
Quebec	16.3 ( 7 )	18.6 ( 8 )	25.5 ( 1 )	26.1 ( 1 )	27.7 ( 1 )	31.3 ( 1 )
Ontario	20.0 ( 5 )	20.5 ( 5 )	18.8 ( 8 )	17.1 ( 8 )	14.9 ( 8 )	13.9 ( 8 )
Manitoba	21.7 ( 2 )	23.5 ( 4 )	21.2 ( 6 )	21.3 ( 3 )	19.6 ( 5 )	18.0 ( 6 )
Saskatchewan	21.6 ( 3 )	23.7 ( 3 )	25.1 ( 2 )	20.8 ( 4 )	21.9 ( 4 )	20.6 ( 4 )
Alberta	21.6 ( 3 )	25.3 ( 1 )	24.5 ( 3 )	24.0 ( 2 )	25.8 ( 2 )	23.4 ( 2 )
British Columbia	25.0 ( 1 )	24.2 ( 2 )	21.8 ( 5 )	19.8 ( 6 )	19.4 ( 6 )	17.1 ( 7 )
Yukon <sup>2</sup>	69.1	34.6	44.7	45.8	31.2	33.2
Northwest Territories <sup>2</sup>	30.1	39.4	40.2	24.5	25.8	33.7
Nunavut <sup>2</sup>	..	..	..	..	125.4	115.7
Canada	19.5	20.8	21.8	20.8	20.6	20.4
Females						
Newfoundland and Labrador	1.6 ( 9 )	0.9 ( 9 )	1.3 ( 9 )	1.2 ( 9 )	2.8 ( 9 )	1.9 ( 9 )
Prince Edward Island <sup>2</sup>	1.7	4.3	2.7	3.3	2.7	3.3
Nova Scotia	3.9 ( 7 )	4.5 ( 7 )	3.5 ( 7 )	3.6 ( 8 )	3.9 ( 7 )	3.8 ( 7 )
New Brunswick	3.3 ( 8 )	4.4 ( 8 )	3.4 ( 8 )	4.3 ( 7 )	3.6 ( 8 )	3.5 ( 8 )
Quebec	5.7 ( 6 )	6.6 ( 6 )	7.8 ( 2 )	7.2 ( 1 )	6.7 ( 2 )	8.2 ( 1 )
Ontario	9.2 ( 2 )	8.2 ( 3 )	6.9 ( 3 )	5.6 ( 4 )	4.3 ( 6 )	3.9 ( 6 )
Manitoba	7.5 ( 4 )	7.7 ( 4 )	5.7 ( 6 )	6.1 ( 3 )	4.6 ( 5 )	4.4 ( 3 )
Saskatchewan	5.9 ( 5 )	7.6 ( 5 )	6.0 ( 5 )	5.2 ( 6 )	5.2 ( 4 )	4.3 ( 4 )
Alberta	7.6 ( 3 )	8.5 ( 2 )	8.1 ( 1 )	6.3 ( 2 )	7.2 ( 1 )	6.2 ( 2 )
British Columbia	11.4 ( 1 )	9.9 ( 1 )	6.9 ( 3 )	5.6 ( 4 )	5.3 ( 3 )	4.2 ( 5 )
Yukon <sup>2</sup>	25.5	11.6	12.1	8.7	1.4	6.4
Northwest Territories <sup>2</sup>	6.1	6.8	9.3	4.7	3.0	3.0
Nunavut <sup>2</sup>	..	..	..	..	27.4	35.8
Canada	7.6	7.5	6.8	5.9	5.3	5.2

<sup>1</sup> Rate per 100,000, standardized on the structure by age and sex of the 1991 population. The rates can't be compared between sexes but the tendencies can.

<sup>2</sup> The variations can be random because of the low counts.

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section and Research and Analysis Section.

and Prince Edward Island, the figures are low and the rates shown are based on only a small number of events. Therefore it is not possible to comment on the evolution of the suicide death rate in these regions. However, the rates shown in the table give an idea of the scope of the phenomenon.

**Table 7. Suicide Death Rates (per 100,000) by Sex and Age Group, Quebec and Rest of Canada, 1995-1999**

Age Group	Males			Females		
	Quebec (1)	Rest of Canada (2)	Ratio (1) / (2)	Quebec (1)	Rest of Canada (2)	Ratio (1) / (2)
15-19	32.31	15.14	2.13	8.50	4.06	2.10
20-24	43.23	21.49	2.01	7.13	3.54	2.01
25-29	40.37	20.47	1.97	8.35	4.77	1.75
30-34	43.07	22.08	1.95	8.86	5.02	1.76
35-39	44.24	24.19	1.83	12.08	6.30	1.92
40-44	44.99	23.90	1.88	15.52	6.84	2.27
45-49	44.20	22.62	1.95	15.58	7.14	2.18
50-54	38.26	22.64	1.69	11.96	6.77	1.77
55-59	33.59	20.72	1.62	10.76	5.43	1.98
60-64	29.56	18.26	1.62	8.37	4.89	1.71
65-69	26.20	17.81	1.47	7.27	4.49	1.62
70-74	30.93	20.75	1.49	6.29	4.64	1.35
75-79	31.98	20.49	1.56	4.81	4.71	1.02
80-84	25.46	29.26	0.87	3.99	4.67	0.85
85-89	32.42	32.16	1.01	4.09	3.52	1.16
90 and Over	27.16	36.40	0.75	2.03	3.89	0.52

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section, Demography Division, Demographic Estimates Section and Research and Analysis Section.

### *Age-based Rates for Quebec, Ontario and Canada in 1999*

Table 7 shows differences in the suicide death rate between Quebec and the other provinces by age group. The evolution of suicide by age is similar for males and females, although the levels are higher for males. For males, suicide mortality rates are high for young adults, and they peak at between 35 and 45 years of age. They then decline slightly to age 65, after which they rise again, although more modestly. For females, the maximum suicide mortality rate is reached between ages 45 and 49, after which it gradually declines. There is no indication that retirement affects suicide mortality rates for women.

The ratio of Quebec suicide mortality rates to those of other provinces serves to highlight the age groups in which the differences between Quebec and the other provinces are the largest. A ratio of one indicates that the rates by age are identical in the two regions; when the ratio exceeds one, this means that the rates by age are higher than those observed for the rest of Canada. Table 7 shows that before age 50, suicide mortality is approximately twice as high in Quebec as in the rest of Canada. Beyond this age, the ratio gradually declines to one, even falling slightly below that level in the 80-84 age group. Thus it seems clear that the high level of suicide mortality in Quebec largely results from the behaviour of young adults, who have much higher rates than in the rest of Canada.

INTERNATIONAL IMMIGRATION

*In 2000, Canada received 227,300 immigrants, an increase of some 37,400 over 1999* (Table A11, appended). *The number of immigrants received was therefore up 20% from the previous year.* The immigration rate reached 7 per 1,000, and the number of immigrants exceeded 225,000 for the first time since 1996. However, this was still short of the levels in excess of 250,000 that were registered in 1992 and 1993 (Figure 8). During the 1990s, the annual number of immigrants admitted to Canada exceeded 200,000 except in 1998 and 1999. Statistics for that decade show the strength of immigration to Canada during a ten-year period in which more than 2,200,000 persons entered the country as immigrants.

Since the Immigration Plan called for the admission of 200,000 to 225,000 persons, its objectives were surpassed in 2000 (Table 8). The goal formulated by Citizenship and Immigration Canada is to attain an annual immigration level equal to 1% of the Canadian population. The level recorded in 2000 is still far from that figure, since it would have been necessary to admit just over 300,000 immigrants, or 72,700 more than the actual number. Since the end of World War II, the 1% mark has been reached or exceeded only seven times, in the years from 1951 to 1954 and in 1956, 1957 and 1967. At no time during this period has the number of immigrants ever reached 300,000. The only year that came close was 1957, with 270,000 immigrants admitted, representing 1.7% of the population at that time. For 2002, Citizenship and Immigration planned to admit between 210,000 and 235,000 immigrants. This is 10,000 more than the objective for 2001, which was unchanged from 2000.

Immigrant Classes

*Approximately 132,000 persons, or 58% of the total number of immigrants received in 2000, entered under the economic component of the immigration policy* (Table 9). *This was the highest number in the past twenty years* and was the same proportion as in 1997. This number slightly exceeds the

**Table 8. Number of Immigrants Admitted and Number Planned by Class According to the Immigration Plan, Canada, 2000**

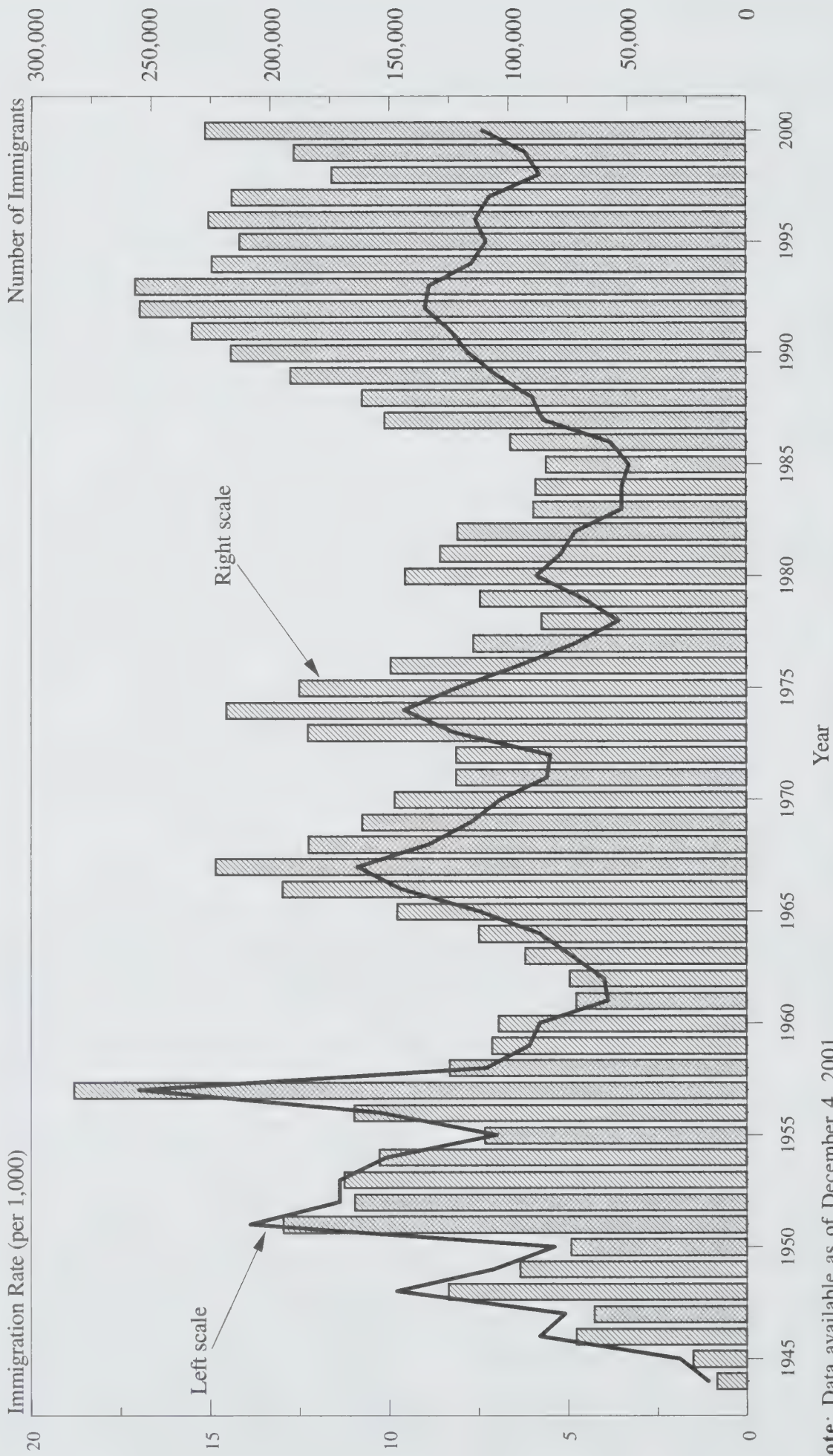
Class	Number Planned	Observed Number
Family	57,000 - 61,000	60,552
Economic	116,900 - 130,700	132,020
Other <sup>1</sup>	4,000	4,706
Total Immigrants	177,900 - 195,700	197,278
Total Refugees	22,100 - 29,300	30,058
Total	200,000 - 225,000	227,336

<sup>1</sup> Includes deferred removal order & post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of December 4, 2001.  
**Source:** Citizenship and Immigration Canada, Internet site, December 4, 2001.



Figure 8. Number of Immigrants and Immigration Rate, Canada, 1944-2000



Note: Data available as of December 4, 2001.

Sources: Employment and Immigration Canada, *Immigration Statistics* and after 1980, Citizenship and Immigration Canada.

**Table 9. Immigrants to Canada by Class, 1980-2000**

Year	Family	Economic	Refugees	Others <sup>1</sup>	Total
	Number				
1980	49,441	46,431	40,658	6,969	143,499
1981	50,535	56,702	15,062	6,495	128,794
1982	50,187	51,148	17,002	2,994	121,331
1983	48,987	24,186	14,064	2,140	89,377
1984	44,593	26,097	15,556	2,353	88,599
1985	39,355	26,113	16,769	2,102	84,339
1986	42,470	35,837	19,199	1,835	99,341
1987	53,796	74,100	21,466	2,666	152,028
1988	51,397	80,221	26,740	3,172	161,530
1989	60,939	90,141	36,865	3,570	191,515
1990	74,367	95,638	36,101	10,315	216,421
1991	85,949	80,007	35,880	30,936	232,772
1992	96,797	82,285	37,024	38,752	254,858
1993	110,445	95,653	24,895	25,771	256,764
1994	93,718	96,574	19,750	14,352	224,394
1995	77,228	100,910	27,763	6,970	212,871
1996	68,320	120,282	28,342	9,108	226,052
1997	59,959	125,471	24,134	6,466	216,030
1998	50,886	94,974	22,700	5,612	174,172
1999	55,272	105,463	24,378	4,831	189,944
2000	60,552	132,020	30,058	4,706	227,336
	Percentage				
1980	34.5	32.4	28.3	4.9	100.0
1981	39.2	44.0	11.7	5.0	100.0
1982	41.4	42.2	14.0	2.5	100.0
1983	54.8	27.1	15.7	2.4	100.0
1984	50.3	29.5	17.6	2.7	100.0
1985	46.7	31.0	19.9	2.5	100.0
1986	42.8	36.1	19.3	1.8	100.0
1987	35.4	48.7	14.1	1.8	100.0
1988	31.8	49.7	16.6	2.0	100.0
1989	31.8	47.1	19.2	1.9	100.0
1990	34.4	44.2	16.7	4.8	100.0
1991	36.9	34.4	15.4	13.3	100.0
1992	38.0	32.3	14.5	15.2	100.0
1993	43.0	37.3	9.7	10.0	100.0
1994	41.8	43.0	8.8	6.4	100.0
1995	36.3	47.4	13.0	3.3	100.0
1996	30.2	53.2	12.5	4.0	100.0
1997	27.8	58.1	11.2	3.0	100.0
1998	29.2	54.5	13.0	3.2	100.0
1999	29.1	55.5	12.8	2.5	100.0
2000	26.6	58.1	13.2	2.1	100.0

<sup>1</sup> Includes deferred removal order & post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of December 4, 2001.

**Source:** Citizenship and Immigration Canada.



objectives of the Immigration Plan, which called for between 116,900 and 130,700 persons in this component (Table 8). Canada's current immigration policy is designed to encourage the admission of immigrants selected according to personal qualifications—notably age, education level and knowledge of one of the official languages—that will make it easier for them to integrate rapidly into the Canadian population.

Like the total number of immigrants, the number of those admitted on the basis of family ties with Canadians has been rising for three years. However, the proportion represented by the family component was down slightly from the previous year, since it was only 27%, compared to nearly 30% in 1999. This proportion has generally been declining since 1993, when 43% of the immigrants for the year were admitted under the family component of the Immigration Act.

There was also an increase in the number and proportion of refugees. The 30,100 refugees received in 2000 represent 13% of the total immigrant flow, exceeding the objective set out in the Plan. This number amounts to an increase of 23% over the previous year (Table 9). At times in the past, Canada has admitted more refugees—especially in 1980, when the 40,000 refugees taken in accounted for 28% of total immigration—but 2000 saw the largest contingent of refugees since 1992, both in numbers and as a proportion of total immigration.

### **Immigrants' Place of Birth**

As has been the case for a number of years now, Asia is by far the continent that provides the largest share of Canadian immigration. ***In 2000, 140,500 of the immigrants admitted were from Asia, and they accounted for 62% of all immigrants received in Canada.*** As the leading supplier of Canadian immigrants, China (including Hong Kong) is the country of origin of nearly 41,000 of the immigrants received during the year, or 18% of the total (Table A11, appended). Of this number, 33,100 were admitted under the economic component of Canada's immigration policy, 7,100 in the family class and 600 by virtue of their refugee status (Table 10). The number of immigrants from China increased by 7,100 in 2000 compared with 1999. This was an increase of 20% over the previous year, proportional to the total increase.

The two countries that rank next on the list of countries providing the largest number of immigrants—India and Pakistan, with 28,200 and 14,900 immigrants respectively—have seen their number of emigrants to Canada increase in even larger proportions. The number of immigrants from India increased by 9,300, a 50% increase over the 18,800 admitted in 1999. The Pakistani contingent grew by 5,300, an increase of 55% compared with the figure for the previous year. India is noteworthy for supplying a great number of immigrants in the family class: 43% of the arrivals from that country were



**Table 10. Number of Immigrants According to the 10 Main Countries of Birth by Class, Canada, 2000**

	Economic	Family	Refugees	Others <sup>1</sup>	Total
China and Hong Kong	<b>33,077</b>	7,080	632	156	40,945
India	14,979	<b>12,240</b>	859	105	28,183
Pakistan	11,018	2,464	1,340	43	14,865
Philippines	4,387	3,500	9	2,740	10,636
South Korea	6,761	766	16	65	7,608
Sri Lanka	993	1,752	3,258	62	6,065
Iran	3,525	860	1,503	27	5,915
Ex-Yugoslavia	534	418	4,469	1	5,422
United States	2,542	2,530	48	19	5,139
Russia	3,300	988	370	206	4,864

<sup>1</sup> Includes deferred removal order & post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of December 4, 2001.

**Source:** Citizenship and Immigration Canada.

admitted in this class. Because of the large number of Indian immigrants and the sizable proportion of them admitted in the family class, a fifth of all immigrants received in this class were from India.

A fourth Asian country that supplied more than 10,000 immigrants to Canada in 2000 was the Philippines, the country of origin of 5% of all immigrants admitted that year. More than a quarter of Filipino immigrants, namely 2,700 of the 10,600 immigrants from the Philippines, were not admitted under any of the three main components of the Immigration Act. Falling into the "Other" class, the great majority of them were women who applied to immigrate after entering Canada as a live-in caregiver. Among the Asian countries that supply a large number of immigrants to Canada, only Iran and Taiwan saw their numbers drop appreciably.

In 2000, 42,500 persons from European countries were admitted as immigrants. European immigration therefore represents approximately one-fifth (19%) of the whole, and the number of immigrants from all European countries combined is nearly equal to the number coming from China. Among European countries, those included in the former USSR are by far the ones that supply the most immigrants to Canada.

In all, 11,700 immigrants came from one or another of the former Soviet republics (Table 11), and they represent just over 27% of European immigrants and slightly more than 5% of the total. The countries that made up the former Yugoslavia contributed 7,100 immigrants, the great majority (82%) of whom were admitted to Canada as refugees. However, immigration from Bosnia-Herzegovina has dried up in favour of other regions of the former Yugoslavia, with Kosovo the site of the conflict producing these population flows. It is

**Table 11. Countries of Birth from Which more than 2,000 Immigrants Came to Canada in 1998, 1999 or 2000**

Country of Birth	1998	1999	2000	Difference Between 1998 and 1999	Difference Between 1999 and 2000
<b>AFRICA</b>					
Algeria	2,256	2,368	2,853	112	485
Morocco	1,316	1,913	<b>2,691</b>	597	778
<b>AMERICA</b>					
Colombia	937	1,299	<b>2,247</b>	362	948
Jamaica	2,269	2,363	2,463	94	100
United States	4,166	4,913	5,139	747	226
<b>ASIA</b>					
Afghanistan	2,082	2,268	3,160	186	892
Bangladesh	2,116	2,010	3,040	-106	1,030
China <sup>1</sup>	29,172	33,882	<b>40,945</b>	<b>4,710</b>	<b>7,063</b>
India	16,989	18,840	<b>28,183</b>	1,851	<b>9,343</b>
Iran	7,008	6,201	5,915	-807	-286
Iraq	1,898	2,037	2,303	139	266
Pakistan	8,440	9,587	<b>14,865</b>	1,147	<b>5,278</b>
Philippines	8,637	9,536	<b>10,636</b>	899	1,100
South Korea	4,955	7,210	7,608	2,255	398
Sri Lanka	3,541	4,936	6,065	1,395	1,129
Taiwan	6,995	5,326	3,409	-1,669	-1,917
<b>EUROPE</b>					
France	3,022	3,181	3,560	159	379
Great Britain	3,284	3,777	3,777	493	0
Romania	3,112	3,583	4,588	471	1,005
Ex-U.S.S.R.	12,328	10,990	<b>11,655</b>	-1,338	665
Russia	4,792	4,397	4,864	-395	467
Ukraine	2,768	2,827	3,565	59	738
Others	4,768	3,766	3,226	-1,002	-540
Ex-Yugoslavia	6,510	6,370	7,132	-140	762
Bosnia-Herzegovina	2,544	2,455	813	-89	-1,642
Others	3,966	3,915	6,319	-51	2,404

<sup>1</sup> Includes Hong Kong.

**Note:** Data available as of December 4, 2001.

**Source:** Citizenship and Immigration Canada.

worth noting that in 2000, Romania, with 4,600 immigrants, placed well ahead of France and the United Kingdom with 3,600 and 3,800 respectively. Only Russia, with 4,900 immigrants, placed ahead of Romania among European countries.

There have never before been so many immigrants from Africa as in 2000, with more than 20,700 persons. That continent supplied 9% of immigrant arrivals during the year. Central and North America, the West Indies and Bermuda, South America, Australasia and Oceania generally increased their contribution slightly, but there was no major change in their relative weight.

Lastly, by the very nature of the objectives of the refugee policy, the countries from which most refugees come are not the same as those that contribute

the majority of immigrants admitted under other components of the policy. In 2000, the three countries that supplied the most refugees to Canada were the former Yugoslavia (4,500), Sri Lanka (3,300) and Afghanistan (2,700). Each year since 1995, Canada has received at least 1,000 refugees from Afghanistan, but the number admitted in 2000 marks a major increase, since the corresponding number the year before was 1,900. Throughout the period 1995-2000, the greatest number of refugees admitted to Canada consistently originated from the countries of the former Yugoslavia or Sri Lanka.

### **Destination of Immigrants**

For many years, most new arrivals to Canada have settled in three provinces: Ontario, British Columbia and Quebec (Table 12). The year 2000 was no exception, with these three provinces attracting 90% of all immigrants. *Ontario has long been the main province of destination of immigrants, and since the mid-1980s it has consistently received more than half the total. In 2000, that province's dominance increased even further, with 59% of the immigrants received choosing to settle there* (Figure 9). This was a record level in the recent history of Canadian immigration.

This increase was offset by a corresponding decrease in the proportion of immigrants choosing to settle in British Columbia. In 2000, that province attracted only 16% of all immigrants, compared to 19% the previous year and more than 20% in each year between 1994 and 1998. The proportion of immigrants choosing British Columbia is approaching Quebec's proportion (14%), whereas between 1994 and 1999 it had substantially surpassed the figure for Quebec. In the other Canadian provinces, there were few changes in 2000. Even Alberta, which is experiencing a period of sustained economic growth and boasts the highest net interprovincial migration of any province, maintained the same proportion of immigrants (6%) as in previous years.

Immigration is becoming more concentrated, and this is probably linked to the growing importance of the economic class. More than three out of five immigrants in this class (62%) chose to settle in Ontario (Table 13). Of all provinces, *Ontario is the one with the highest proportion of economic immigrants (62%)*, although the proportion is similar for British Columbia (61%). In comparison, only 49% of Quebec's immigration consists of economic immigrants, and only 52% of Alberta's. Ontario attracts a proportion of family-class immigrants (58%) that is equivalent to this province's share of Canadian immigration in general. On the other hand, a smaller proportion of refugees settle in Ontario (50%).

Quebec stands out from both British Columbia and Ontario by the large proportion of refugees among the immigrants that it receives. One Quebec immigrant in four (25%) was admitted as a refugee, compared with one in ten (11%) for Ontario and one in fourteen (7%) for British Columbia.



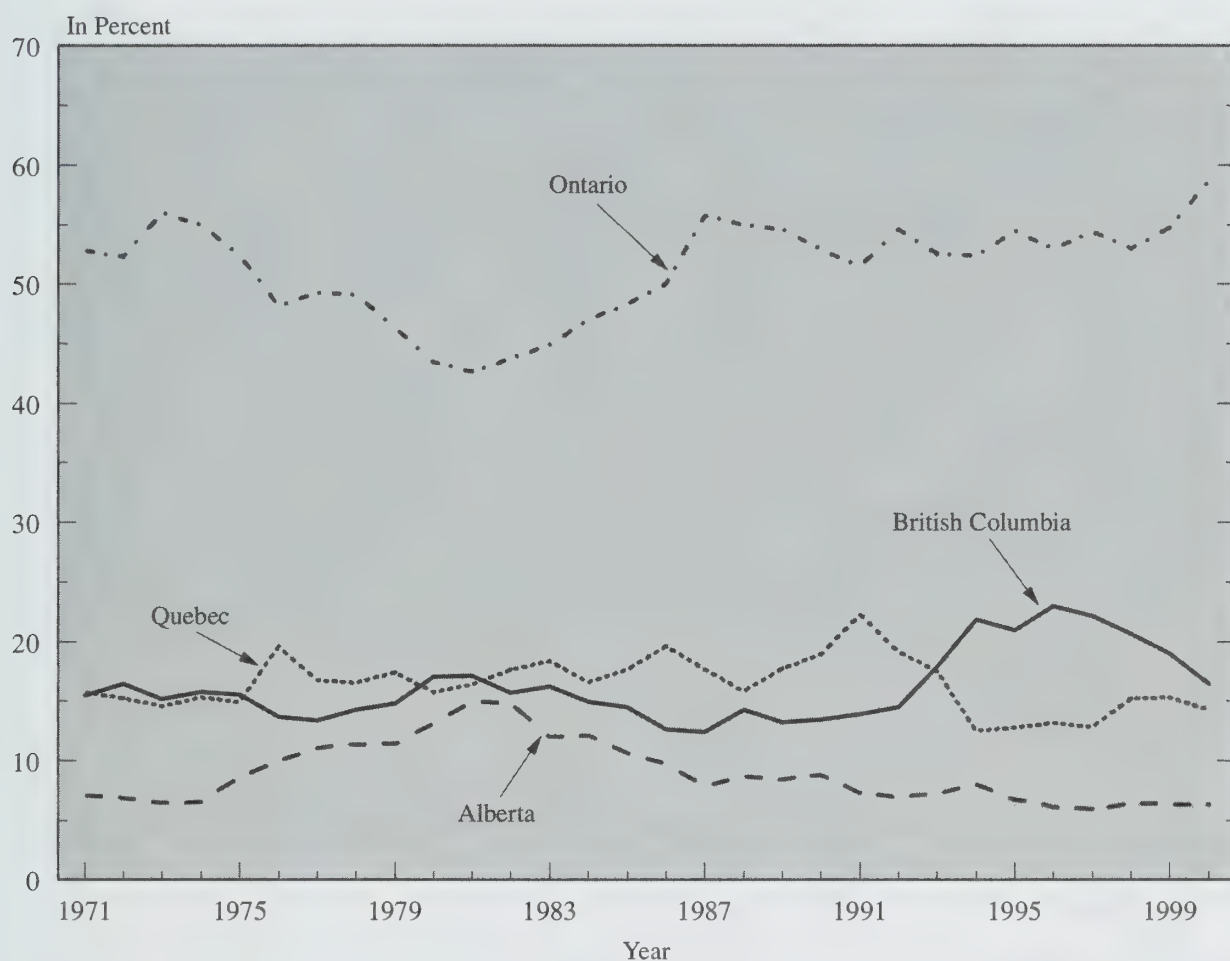
**Table 12. Percentage Distribution of Landed Immigrants by Intended Province of Destination, Canada, 1971, 1981, 1986, 1989-2000**

Province	Year														
	1971	1981	1986	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Newfoundland and Labrador	0.7	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Prince Edward Island	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nova Scotia	1.5	1.1	1.1	0.8	0.7	0.6	0.9	1.2	1.5	1.7	1.4	1.3	1.2	0.8	0.7
New Brunswick	0.9	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3
Quebec	15.8	16.4	19.6	17.7	18.9	22.3	19.1	17.5	12.5	12.8	13.2	12.8	15.2	15.3	14.3
Ontario	52.8	42.7	50.0	54.6	52.9	51.5	54.6	52.5	52.4	54.4	52.9	54.5	53.0	54.8	58.7
Manitoba	4.3	4.2	3.8	3.2	3.1	2.4	2.0	1.9	1.8	1.7	1.7	1.7	1.7	1.9	2.0
Saskatchewan	1.2	1.9	1.9	1.1	1.1	1.1	1.0	0.9	1.0	0.9	0.8	0.8	0.9	0.9	0.8
Alberta	7.1	15.0	9.7	8.4	8.8	7.3	7.0	7.2	8.0	6.7	6.1	5.9	6.4	6.4	6.3
British Columbia	15.5	17.1	12.6	13.2	13.4	13.9	14.5	17.9	21.9	20.9	23.0	22.1	20.7	19.0	16.4
Yukon, Northwest Territories and Nunavut	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Unknown	0.0	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1
Total Percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number	121,717	128,794	99,341	191,515	216,421	232,772	254,858	256,764	224,394	212,871	226,052	216,030	174,172	189,944	227,336

**Note:** Data available as of December 4, 2001.

**Sources:** Employment and Immigration Canada, *Immigration Statistics* and after 1980, Citizenship and Immigration Canada.

**Figure 9. Proportion of Immigrants Going to Ontario, Quebec, British Columbia and Alberta, 1971-2000**



**Note:** Data available as of December 4, 2001.

**Sources:** Employment and Immigration Canada, *Immigration Statistics* and after 1980, Citizenship and Immigration Canada.

If most Canadian immigrants are concentrated in the three most populous provinces, this is largely because they mainly cluster in the three large metropolises of Toronto, Montreal and Vancouver (Figure 10). *In 1980, Toronto alone attracted nearly a quarter of the total immigrants; Montreal and Vancouver each attracted a tenth. In twenty years, Toronto has doubled its power to attract new arrivals, since nearly half of them settled there in 2000.* The proportion of immigrants choosing Montreal or Vancouver has shown much less change over these twenty years, and the two metropolitan areas each received slightly more than 10% of Canadian immigration in 2000. Montreal attracted 20% of the immigrants in 1991, a peak level for this city, and Vancouver reached the same proportion in 1996 and 1997, but in both cases the situation was short-lived. Toronto stands out sharply from the other two Canadian metropolises in its sustained and growing attractiveness for immigrants admitted to Canada.

**Table 13. Number of Immigrants and Percentage Distribution by Province of Destination and Class, Canada, 2000**

Province	Family	Economic	Refugees	Others <sup>1</sup>	Total
Number					
Newfoundland and Labrador	91	183	140	1	415
Prince Edward Island	33	50	109	0	192
Nova Scotia	309	1,018	269	5	1,601
New Brunswick	146	321	267	24	758
Quebec	7,947	15,963	8,042	492	32,444
Ontario	34,943	82,198	15,108	1,127	133,376
Manitoba	1,059	1,402	1,023	1,153	4,637
Saskatchewan	414	735	649	90	1,888
Alberta	4,471	7,387	1,867	602	14,327
British Columbia	10,966	22,667	2,576	1,186	37,395
Yukon	38	20	0	2	60
Northwest Territories	46	14	1	21	82
Nunavut	9	1	0	1	11
Not Stated	80	61	7	2	150
Total	60,552	132,020	30,058	4,706	227,336
Distribution by Province (%)					
Newfoundland and Labrador	0.2	0.1	0.5	0.0	0.2
Prince Edward Island	0.1	0.0	0.4	0.0	0.1
Nova Scotia	0.5	0.8	0.9	0.1	0.7
New Brunswick	0.2	0.2	0.9	0.5	0.3
Quebec	13.1	12.1	26.8	10.5	14.3
Ontario	57.7	62.3	50.3	23.9	58.7
Manitoba	1.7	1.1	3.4	24.5	2.0
Saskatchewan	0.7	0.6	2.2	1.9	0.8
Alberta	7.4	5.6	6.2	12.8	6.3
British Columbia	18.1	17.2	8.6	25.2	16.4
Yukon	0.1	0.0	0.0	0.0	0.0
Northwest Territories	0.1	0.0	0.0	0.4	0.0
Nunavut	0.0	0.0	0.0	0.0	0.0
Not Stated	0.1	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0
Distribution by Class (%)					
Newfoundland and Labrador	21.9	44.1	33.7	0.2	100.0
Prince Edward Island	17.2	26.0	56.8	0.0	100.0
Nova Scotia	19.3	63.6	16.8	0.3	100.0
New Brunswick	19.3	42.3	35.2	3.2	100.0
Quebec	24.5	49.2	24.8	1.5	100.0
Ontario	26.2	61.6	11.3	0.8	100.0
Manitoba	22.8	30.2	22.1	24.9	100.0
Saskatchewan	21.9	38.9	34.4	4.8	100.0
Alberta	31.2	51.6	13.0	4.2	100.0
British Columbia	29.3	60.6	6.9	3.2	100.0
Yukon	63.3	33.3	0.0	3.3	100.0
Northwest Territories	56.1	17.1	1.2	25.6	100.0
Nunavut	81.8	9.1	0.0	9.1	100.0
Not Stated	53.3	40.7	4.7	1.3	100.0
Total	26.6	58.1	13.2	2.1	100.0

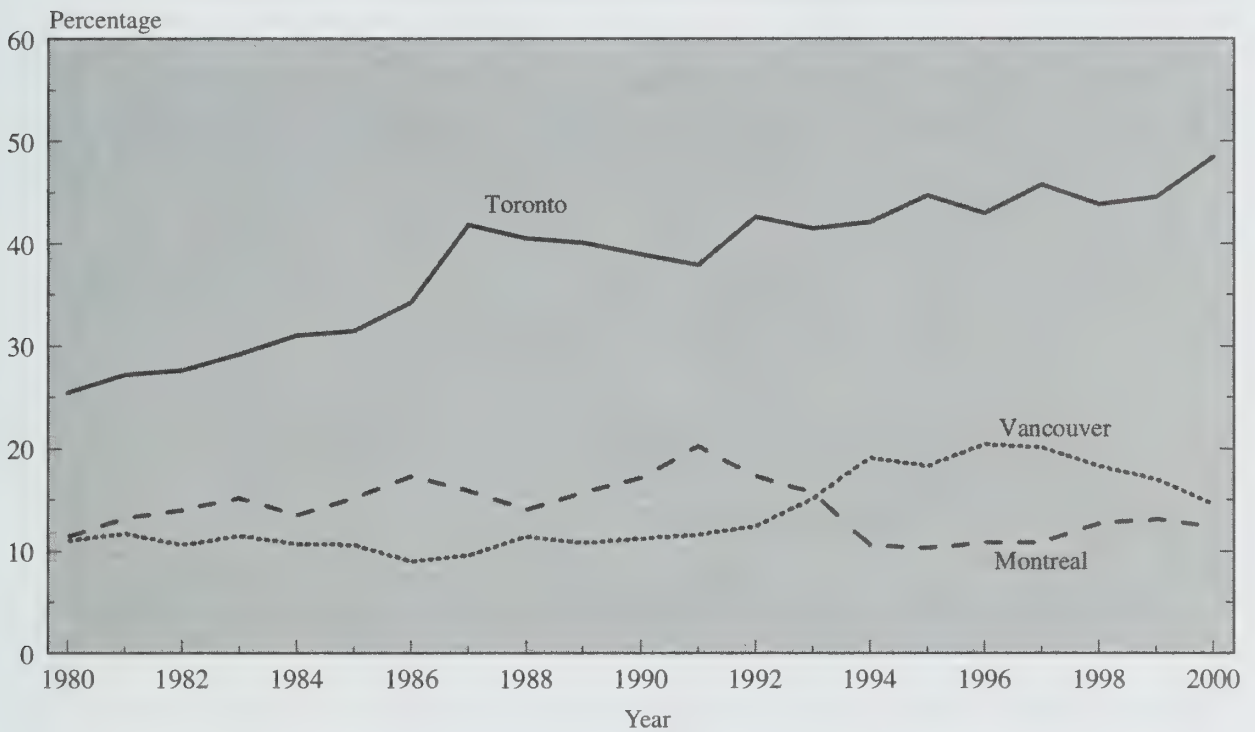
<sup>1</sup> Includes deferred removal order & post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of December 4, 2001.

**Source:** Citizenship and Immigration Canada.



**Figure 10. Proportion of Immigrants Going to the Three Main Census Metropolitan Areas of Canada, 1980-2000**



**Note:** Data available as of January 16, 2002.

**Source:** Citizenship and Immigration Canada.

## Conclusion

In brief, the number of international immigrants received in 2000 surpassed the objectives of the Immigration Plan and once again passed the 200,000 mark, as in much of the 1990s. *Compared to previous years, 2000 saw a concentration of immigration in three respects: an increasingly number of immigrants were in the economic class; more of them came from Asia; and a growing proportion settled in Ontario.*

Since 1994, the growth of Canada's population has been based more on migration than on natural increase. Unless there is a reversal of current fertility trends, immigration should, in the coming years, account for a growing share of Canadian population growth. Canada's situation differs from that of the United States, since that country can count on a fertility rate approaching the replacement level (see article in second part of the Report). However, even at high levels, immigration cannot prevent the aging of the Canadian population. At most it can somewhat slow the aging and thus give institutions a little more time to meet the challenges of an aging society.

## INTERNAL MIGRATION

Table 14 shows the recent evolution of net migration between provinces and territories. According to preliminary data, the year 2000 saw a continuation of trends in the Canadian migration system that extend back to the mid-1990s and sometimes longer:

1. Ontario's net migration, which has been increasing since 1992, was positive for a fourth consecutive year;
2. in Western Canada, migratory flows continued to favour Alberta at the expense of British Columbia;
3. all the other provinces posted losses in their migratory exchanges.

The data shown in Table 14 for 2000, the most recent year available, are not directly comparable with those shown for other years. The 2000 figures are preliminary data obtained, in part, from information extracted from child tax benefit files, whereas for the previous years they are final data obtained from address changes reported by taxpayers on their income tax returns. Flows from one province to another are sometimes subject to major corrections when the final data become available, but in general, the differences between the net migration figures obtained from preliminary and final data are much smaller. It is therefore useful to comment on the preliminary data in the context of recent trends, although slight fluctuations should not be assigned too much importance.

In 2000, net migration figures showed little change from the previous year. *After eight years of negative figures between 1989 and 1996, Ontario's net migration has been positive, and it was up for the fourth consecutive year.* Only Ontario (22,700) and Alberta (27,100) showed positive net interprovincial balances in 2000, with both apparently higher than in 1999. Both provinces gained from their exchanges with all the other provinces and, in a surprising coincidence, they exchanged 25,400 persons with each other without either province actually gaining from the exchange. The flow of migrants leaving Ontario for Alberta (12,691) was within ten persons of being equal to the opposite flow (12,699) from Alberta to Ontario (Table 16).

Since 1997, favoured by economic growth in the oil sector, Alberta has benefited more than any other province from internal migratory exchanges, and this situation continued in 2000. Compared with the previous year, the increase in net migration was greater for Alberta, whose net figure reached 27,100 (up 7,400) than for Ontario (up 4,300). Alberta's gains were mainly at the expense of the neighbouring provinces of Saskatchewan and British Columbia, which are also the provinces whose net migration figures appear

Table 14. Net Migration for Provinces and Territories, 1972-2000

Year	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yuk.	N.W.T.	Nun.	Total Number of Interprovincial Migrants
1972	-189	858	2,845	241	-19,891	8,227	-7,735	-17,296	6,538	24,927	575	900	...	375,184
1973	-2,510	478	2,107	2,841	-14,730	-5,275	-2,200	-13,261	2,698	30,537	-269	-416	...	433,992
1974	-618	1,386	1,576	4,192	-11,852	-22,163	-5,400	-4,835	14,810	22,655	97	152	...	421,336
1975	915	814	4,454	7,572	-12,340	-25,057	-4,134	6,555	23,463	-2,864	242	380	...	385,330
1976	-2,732	309	361	1,640	-20,801	-10,508	-3,655	3,819	34,215	-1,490	-350	-808	...	376,970
1977	-4,009	614	-1,277	-886	-46,536	8,596	-3,789	384	32,344	15,507	57	-1,005	...	366,918
1978	-3,540	25	-109	-1,644	-33,424	415	-9,557	-3,701	31,987	20,698	-178	-972	...	348,929
1979	-4,217	-225	-1,840	-2,219	-30,025	-15,317	-13,806	-3,510	39,212	33,241	-447	-847	...	370,862
1980	-3,082	-1,082	-2,494	-4,165	-24,283	-34,919	-11,342	-4,382	46,933	40,165	-419	-930	...	372,167
1981	-6,238	-783	-2,465	-4,766	-22,549	-19,665	-3,621	-520	40,243	21,565	-1,376	175	...	380,041
1982	261	-6	1,591	2,183	-28,169	19,614	1,498	1,743	3,961	-2,019	-1,208	551	...	322,634
1983	-1,092	799	3,861	2,296	-19,080	32,825	950	2,501	-26,246	4,029	-808	-35	...	285,599
1984	-3,585	524	2,963	812	-10,943	36,691	-49	733	-30,591	3,505	-111	51	...	273,323
1985	-5,019	-13	-234	-1,559	-6,023	33,414	-1,755	-5,014	-9,568	-3,199	-445	-585	...	281,275
1986	-4,682	-493	-739	-2,897	-3,020	42,916	-3,039	-7,020	-20,293	910	179	-1,822	...	302,352
1987	-4,374	301	-2,183	-1,762	-7,410	40,278	-4,751	-9,043	-27,595	17,618	100	-1,179	...	318,890
1988	-2,154	424	71	-1,215	-7,003	14,898	-8,584	-16,338	-5,535	25,865	349	-778	...	323,685
1989	-2,606	-102	572	-21	-8,379	-1,205	-10,004	-18,589	3,366	37,367	-30	-369	...	347,990
1990	-1,137	-273	-106	1,014	-9,567	-15,117	-8,613	-15,928	11,055	38,704	-26	-6	...	332,637
1991	-1,084	-415	1,039	-79	-13,047	-9,978	-7,581	-9,499	5,511	34,572	478	83	...	315,420
1992	-2,563	232	355	-1,087	-9,785	-13,530	-6,417	-7,727	1,030	39,578	215	-220	...	309,680
1993	-3,397	532	-1,143	-492	-7,426	-12,771	-5,206	-4,543	-2,355	37,595	-755	-43	-81	283,737
1994	-6,204	694	-2,694	-505	-10,252	-4,527	-4,010	-3,958	-2,684	34,449	-245	75	-139	286,860
1995	-6,566	368	-1,972	-931	-10,248	-1,764	-3,344	-3,190	4,251	23,414	656	-440	-234	286,746
1996	-7,945	401	-1,064	-910	-15,358	-1,706	-3,738	-1,871	15,069	17,798	215	-642	-249	284,484
1997	-8,522	-241	-2,074	-1,812	-17,559	6,823	-6,717	-2,669	32,459	1,980	-558	-845	-265	291,580
1998	-7,971	-15	-1,571	-2,935	-14,512	11,466	-3,097	-1,786	40,125	-17,521	-1,114	-1,055	-14	298,158
1999	-3,916	212	947	-638	-11,712	18,424	-2,387	-7,146	19,692	-12,413	-601	-457	-5	276,495
2000 (P)	-4,236	-163	-650	-974	-12,368	22,691	-3,624	-9,159	27,125	-17,296	-752	-644	50	321,161
Total	-103,012	5,160	127	-8,706	-458,292	103,776	-145,707	-155,250	311,220	469,877	-6,529	-11,731	-933	9,574,435

(P) Preliminary data.

**Note:** Until 1991, Nunavut is included in the Northwest Territories.

**Source:** Statistics Canada, Demography Division, Population Estimates Section.



Table 15. Annual Number of Interprovincial Migrants According to Revenue Canada Tax Files, 1999

Number of Migrants: 276,495

Province of Origin	Province of Destination												
	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nunavut
Newfoundland and Labrador	...	239	1,893	628	102	5,003	254	160	3,282	655	33	119	99
Prince Edward Island	114	...	555	328	117	716	47	23	372	68	21	11	2
Nova Scotia	1,184	560	...	2,254	790	5,965	462	201	2,259	1,248	34	61	52
New Brunswick	369	407	2,312	...	1,934	3,948	280	206	1,616	514	20	29	34
Quebec	199	66	935	1,619	...	22,418	502	157	2,670	2,925	45	64	89
Ontario	3,082	691	5,520	3,310	11,937	...	3,943	1,438	11,476	13,790	106	296	221
Manitoba	145	47	439	204	440	4,975	...	2,185	4,846	2,883	49	104	81
Saskatchewan	135	27	323	174	286	2,440	2,324	...	11,802	3,272	65	174	52
Alberta	2,278	293	2,106	1,566	1,679	12,127	3,315	6,523	...	17,180	251	841	109
British Columbia	818	227	1,687	814	2,584	15,845	2,590	2,806	27,562	...	606	366	77
Yukon	53	13	18	18	32	238	91	75	609	699	...	31	7
Northwest Territories	94	10	148	73	27	331	110	122	1,341	287	51	...	194
Nunavut	80	6	81	43	49	228	93	32	125	48	2	235	...
In	8,551	2,586	16,017	11,031	19,977	74,234	14,011	13,928	67,960	43,569	1,283	2,331	1,017
Out	12,467	2,374	15,070	11,669	31,689	55,810	16,398	21,074	48,268	55,982	1,884	2,788	1,022
Net Migration	-3,916	212	947	-638	-11,712	18,424	-2,387	-7,146	19,692	-12,413	-601	-457	-5

Source: Statistics Canada, Demography Division, Population Estimates Section.

Table 16. Annual Number of Interprovincial Migrants According to Revenue Canada Tax and Child Tax Credit Files, 2000

Number of Migrants: 321,161

Province of Origin	Province of Destination												
	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nunavut
Newfoundland and Labrador	...	250	2,118	812	257	5,861	129	139	3,548	551	28	154	149
Prince Edward Island	221	...	767	473	123	744	7	32	279	222	9	39	13
Nova Scotia	1,349	743	...	2,927	1,149	7,595	334	195	2,920	1,451	23	87	79
New Brunswick	586	452	2,924	...	2,015	4,862	226	102	1,965	712	0	41	50
Quebec	230	133	910	2,287	...	26,168	511	389	2,787	2,701	29	109	151
Ontario	4,044	721	6,288	3,711	14,970	...	4,377	1,924	12,691	14,668	100	378	283
Manitoba	194	49	445	305	520	5,654	...	3,117	5,854	3,427	29	158	120
Saskatchewan	141	70	371	62	265	2,965	3,453	...	15,405	3,736	72	118	38
Alberta	1,934	201	2,210	1,558	1,901	12,699	3,834	8,363	...	18,797	336	862	111
British Columbia	726	135	2,019	750	2,724	19,473	3,039	2,972	31,989	...	590	364	76
Yukon	27	7	32	13	18	191	31	54	869	764	...	70	13
Northwest Territories	155	3	77	42	26	372	152	203	1,487	457	112	...	225
Nunavut	153	2	41	21	69	262	155	47	137	75	9	287	...
In	9,760	2,766	18,202	12,961	24,037	86,846	16,248	17,537	79,931	47,561	1,337	2,667	1,308
Out	13,996	2,929	18,852	13,935	36,405	64,155	19,872	26,696	52,806	64,857	2,089	3,311	1,258
Net Migration	-4,236	-163	-650	-974	-12,368	22,691	-3,624	-9,159	27,125	-17,296	-752	-644	50

Source: Statistics Canada, Demography Division, Population Estimates Section.

to have deteriorated the most. According to preliminary data, these two provinces' losses in their migratory exchanges with the others were 17,300 and 9,200 for British Columbia and Saskatchewan respectively. For both provinces, the negative flow toward neighbouring Alberta alone accounted for just over three-fourths of the entire net loss.

Being next to a province with a booming economy definitely plays a major role in explaining this situation, but there are other factors too. Theoretically, the decision to migrate is often based on a set of pressures in the region of origin and a set of attractions in the region of destination (e.g., the possibility of obtaining a job or taking university courses), as well as the drawbacks associated with moving (e.g., the distance involved may entail not only a financial cost but also an emotional cost in being far from family and friends).

While British Columbia was the province with the largest negative net migration, Quebec (-12,400) was not far behind. But the similarity between the situations of these provinces ends there. First, the dynamics that gave rise to these deficits were not the same. Quebec mainly lost in its exchanges with Ontario (-11,200). Quebec's losses to Ontario accounted for 90% of its net interprovincial migration. British Columbia, as noted, lost mainly to Alberta (-13,200) (Table 16). More important is the fact that in the case of Quebec, negative net migration is a chronic phenomenon, whereas for British Columbia, while net migration has been negative for three years, this is an entirely new situation. Since 1972, British Columbia has had negative net migration only seven times, while its gains have exceeded 30,000 nine times (Table 14). During the same period, Quebec has registered losses every year in its migratory exchanges with other provinces, and more than two-thirds of the time the losses have exceeded 10,000. In all, over the past thirty years or so, Quebec's migratory losses have approached half a million, which is nearly equivalent to the gains registered by British Columbia.

In the case of British Columbia, another factor may therefore explain the negative net migration figures of the past few years. The sizable flow of Canadians from other provinces has, over the years, created a large pool of persons born in other provinces who may potentially migrate back to them. The economic situation in British Columbia is less favourable than in the past, and this might explain in part why that province, which for a number of years posted gains in its migratory exchanges with all other provinces, is now losing in its exchanges with most other provinces. With the 2001 census data, it will be possible to explore this hypothesis more thoroughly.

Changes in net migration between 1999 and 2000 were smaller for the other provinces, and the situation that had prevailed in 1999—sometimes for a number of years—continued in 2000. Saskatchewan (-9,200) and Newfoundland and Labrador (-4,200) posted sizable losses. In the former case, the loss was larger than those observed during the 1990s, while in the



**Table 17. Proportion of Returning Migrants Among Interprovincial In-migrants, Population 5 Years of Age and Over and Born in Canada, Canada, Provinces and Territories, 1991-1996**

Province	Total	Born in the Province	Returning Migrants
Nfld.Lab.	15,415	9,260	<b>60.1</b>
P.E.I.	8,455	2,760	32.6
N.S.	43,905	14,400	32.8
N.B.	32,030	11,235	35.1
Que.	58,905	30,430	<b>51.7</b>
Ont.	154,300	51,115	33.1
Man.	38,750	13,604	35.1
Sask.	44,410	19,295	<b>43.4</b>
Alta	144,840	28,610	19.8
B.C.	201,385	28,910	14.4
Yuk.	5,410	355	6.6
N.W.T. <sup>1</sup>	7,965	800	10.0
Total	755,770	210,774	27.9

<sup>1</sup> Includes Nunavut.

**Source:** Statistics Canada, Census of Canada, 1996.

latter case it has been lower for the past two years. With out-migration rates of 26 per 1,000, these two provinces had the highest rates of all provinces (Table A1, appended).

While out-migration rates remained high for these two provinces, the number of in-migrants appeared to be up slightly for Newfoundland and Labrador after reaching a low in 1994. It appears that in 2000, 9,800 Canadians migrated to this province, compared with 6,300 six years earlier. Recalling the hypothesis of return migrations that was advanced to explain the negative flows now being experienced by British Columbia, the corollary might apply here. Table 17 shows that 60% of native-born Canadians who migrated to the province of Newfoundland and Labrador between 1991 and 1996 were born in that province. This was the

highest proportion of all provinces. It was followed by a proportion of 52% for Quebec and 43% for Saskatchewan, two other provinces that have had sizable negative net migration figures for the past few years. The corresponding proportion for Canada as a whole was 28%, dropping to 15% in the case of British Columbia.

Manitoba, New Brunswick and Prince Edward Island also posted migratory losses in 2000, but they were smaller than those registered by Newfoundland and Labrador or Saskatchewan. Nova Scotia had negative net migration (-600) in 2000, after having a positive figure of 900 the year before. This ran counter to recent trends, since apart from 1999, the province has registered negative net migration every year since 1993.



## APPENDICES





**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	535.9	13.91	17.70	0.66	23.90	6.21	1.27	0.32	0.06	20.72	21.07	-0.35
1973	543.4	8.02	15.58	-3.16	21.82	6.24	1.80	0.50	0.13	23.85	28.45	-4.60
1974	547.8	8.52	12.63	0.25	18.61	5.97	1.88	0.50	-0.01	22.50	23.62	-1.12
1975	552.5	13.42	14.37	3.36	20.16	5.79	1.99	0.40	0.13	22.20	20.56	1.65
1976	559.9	7.08	13.89	-3.93	19.81	5.91	1.29	0.33	-0.02	17.28	22.14	-4.86
1977	563.9	4.58	12.86	-6.41	18.42	5.55	1.03	0.34	-0.01	14.41	21.51	-7.09
1978	566.5	3.46	11.30	-5.96	16.79	5.49	0.66	0.36	-0.02	14.36	20.59	-6.24
1979	568.4	3.92	12.35	-6.56	17.86	5.51	0.97	0.27	0.14	15.66	23.07	-7.40
1980	570.7	5.98	12.21	-4.37	18.05	5.84	0.96	0.19	0.24	16.19	21.58	-5.38
1981	574.1	-1.13	12.03	-10.27	17.65	5.63	0.84	0.32	0.09	14.89	25.76	-10.87
1982	573.5	7.38	10.06	0.95	15.94	5.88	0.71	0.43	0.22	18.40	17.94	0.45
1983	577.7	3.51	9.38	-2.27	15.43	6.04	0.48	0.52	-0.34	13.08	14.97	-1.89
1984	579.7	-0.84	8.70	-5.94	14.77	6.07	0.52	0.44	0.17	9.84	16.03	-6.19
1985	579.2	-3.51	8.55	-8.45	14.70	6.15	0.56	0.39	0.05	10.31	18.99	-8.68
1986	577.2	-2.77	7.91	-7.82	14.05	6.14	0.48	0.48	0.31	13.36	21.48	-8.12
1987	575.6	-1.76	7.20	-6.63	13.51	6.31	0.80	0.27	0.45	14.69	22.29	-7.61
1988	574.6	1.84	6.77	-2.61	13.02	6.24	0.71	0.10	0.53	17.43	21.18	-3.75
1989	575.7	1.52	7.02	-3.17	13.47	6.45	0.81	0.09	0.63	17.51	22.03	-4.52
1990	576.5	2.89	6.44	-1.23	13.17	6.73	0.95	0.12	-0.09	17.75	19.72	-1.97
1991	578.2	2.08	5.82	-1.01	12.38	6.56	1.11	0.32	0.08	17.02	18.89	-1.87
1992	579.4	2.69	5.38	0.34	11.92	6.55	1.36	0.21	3.61	14.04	18.46	-4.42
1993	581.0	-6.15	4.37	-7.49	11.09	6.72	1.39	0.22	-2.81	11.87	17.74	-5.87
1994	577.4	-11.12	3.99	-12.05	11.04	7.05	0.99	0.22	-2.02	10.97	21.78	-10.80
1995	571.0	-11.83	3.39	-12.13	10.32	6.93	1.06	0.24	-1.39	12.26	23.83	-11.57
1996	564.3	-12.24	3.24	-14.18	10.25	7.00	1.04	0.29	-0.77	11.71	25.88	-14.17
1997 PD	557.4	-13.31	1.98	-15.30	9.78	7.80	0.78	0.53	-0.16	12.57	27.96	-15.39
1998 PR	550.1	-12.93	1.40	-14.33	9.14	7.74	0.75	0.62	0.12	13.51	28.09	-14.58
1999 PR	543.0	-5.41	0.96	-6.37	8.94	7.97	0.80	0.66	0.72	15.79	23.02	-7.23
2000 PR	540.1	-7.11	0.56	-7.67	8.80	8.24	0.76	0.69	0.13	18.14	26.01	-7.87
2001 PR	536.2	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.





Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	113.0	11.56	8.43	8.77	17.69	9.26	1.54	0.35	0.03	37.36	29.81	7.55
1973	114.3	7.96	7.55	6.00	16.44	8.89	2.38	0.58	0.03	41.96	37.79	4.17
1974	115.2	15.86	7.33	14.05	16.70	9.37	2.68	0.58	0.01	44.46	32.52	11.94
1975	117.0	10.47	7.40	8.52	16.39	8.98	2.00	0.45	0.05	39.19	32.27	6.92
1976	118.3	9.33	7.12	4.21	16.34	9.22	1.98	0.36	-0.01	36.25	33.65	2.60
1977	119.4	14.42	7.68	6.34	16.38	8.70	1.60	0.37	0.00	32.30	27.20	5.11
1978	121.1	9.57	8.14	1.02	16.31	8.17	1.19	0.38	0.00	28.62	28.42	0.21
1979	122.3	8.11	7.43	0.29	15.75	8.32	2.35	0.29	0.05	27.65	29.48	-1.83
1980	123.3	0.49	7.49	-7.40	15.88	8.39	1.53	0.24	0.08	24.58	33.36	-8.78
1981	123.3	1.74	7.33	-5.29	15.37	8.04	1.04	0.28	0.30	28.12	34.46	-6.34
1982	123.5	7.52	7.61	0.70	15.52	7.90	1.33	0.28	-0.30	27.09	27.14	-0.05
1983	124.5	12.87	6.84	6.81	15.22	8.38	0.84	0.50	0.10	26.17	19.80	6.38
1984	126.1	10.38	6.67	4.48	15.42	8.75	0.86	0.38	-0.13	24.23	20.10	4.13
1985	127.4	6.70	7.02	0.45	15.71	8.68	0.88	0.34	0.00	22.13	22.23	-0.10
1986	128.3	1.05	6.29	-2.28	15.02	8.74	1.31	0.23	0.48	19.45	23.29	-3.84
1987	128.4	5.68	6.52	3.68	15.18	8.67	1.23	0.09	0.20	23.96	21.62	2.34
1988	129.1	6.71	6.68	4.52	15.26	8.58	1.18	0.12	0.19	26.86	23.59	3.27
1989	130.0	2.46	6.52	0.41	14.88	8.37	1.22	0.27	0.25	25.69	26.48	-0.78
1990	130.3	1.30	6.68	-0.92	15.44	8.77	1.35	0.15	-0.03	21.73	23.82	-2.09
1991	130.5	0.93	5.34	-2.50	14.44	9.10	1.15	0.46	-0.02	22.12	25.30	-3.18
1992	130.6	8.17	5.61	2.65	14.11	8.49	1.15	0.37	0.11	21.57	19.80	1.77
1993	131.7	9.76	4.60	5.25	13.26	8.65	1.24	0.24	0.23	18.57	14.55	4.02
1994	133.0	10.62	4.50	6.21	12.84	8.33	1.20	0.28	0.10	20.17	14.98	5.19
1995	134.4	8.49	4.45	4.13	13.00	8.54	1.19	0.27	0.49	18.96	16.23	2.73
1996	135.5	7.36	3.13	4.26	12.45	9.32	1.12	0.26	0.45	20.05	17.10	2.95
1997 PD	136.5	2.43	4.10	-1.68	11.64	7.53	1.10	0.24	-0.78	18.55	20.31	-1.76
1998 PR	136.9	3.01	2.17	0.85	10.97	8.81	0.99	0.25	0.21	19.11	19.22	-0.11
1999 PR	137.3	5.06	2.01	3.05	10.88	8.87	1.00	0.30	0.81	18.79	17.25	1.54
2000 PR	138.0	1.82	1.91	-0.09	10.85	8.94	1.39	0.33	0.03	20.03	21.21	-1.18
2001 PR	138.2	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.



**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	800.5	10.07	8.24	5.61	16.82	8.58	2.33	0.30	0.05	28.21	24.67	3.54
1973	808.6	9.52	7.83	5.44	16.36	8.53	3.14	0.46	0.17	32.31	29.72	2.59
1974	816.4	8.21	7.37	4.55	15.79	8.42	3.17	0.47	-0.08	33.15	31.23	1.92
1975	823.1	11.69	7.64	7.73	15.85	8.21	2.57	0.38	0.16	30.88	25.50	5.38
1976	832.8	6.92	7.02	2.35	15.34	8.32	2.32	0.31	-0.10	27.51	27.08	0.43
1977	838.6	4.84	6.44	-0.02	14.72	8.28	1.89	0.31	-0.08	23.69	25.21	-1.52
1978	842.6	5.74	6.71	0.60	14.85	8.14	1.16	0.33	-0.10	23.07	23.20	-0.13
1979	847.5	4.28	6.55	-0.70	14.61	8.06	1.58	0.25	0.14	21.69	23.86	-2.17
1980	851.1	3.81	6.29	-0.92	14.51	8.21	1.89	0.17	0.28	21.68	24.61	-2.92
1981	854.3	3.90	5.98	-0.88	14.11	8.13	1.64	0.33	0.69	22.51	25.39	-2.88
1982	857.7	8.52	6.25	3.21	14.31	8.06	1.46	0.29	0.20	21.87	20.03	1.85
1983	865.0	10.56	6.16	5.34	14.26	8.10	0.96	0.31	0.26	21.08	16.64	4.44
1984	874.2	9.63	6.22	4.33	14.09	7.87	1.18	0.25	0.03	19.71	16.34	3.37
1985	882.7	5.15	5.80	0.27	14.07	8.27	1.10	0.30	-0.27	18.86	19.13	-0.26
1986	887.2	4.85	5.74	0.12	13.90	8.16	1.23	0.31	0.03	19.18	20.01	-0.83
1987	891.5	3.48	5.60	-1.04	13.56	7.96	1.37	0.30	0.33	19.68	22.12	-2.44
1988	894.6	6.43	5.31	2.18	13.57	8.26	1.45	0.24	0.90	21.38	21.31	0.08
1989	900.4	7.25	5.55	2.75	13.87	8.32	1.63	0.31	0.80	22.56	21.93	0.63
1990	907.0	5.90	6.03	0.93	14.15	8.12	1.72	0.51	-0.17	20.43	20.54	-0.12
1991	912.3	5.47	5.20	1.79	13.13	7.93	1.64	0.70	-0.29	20.73	19.59	1.14
1992	917.3	5.08	4.71	2.23	12.91	8.20	2.57	0.51	-0.21	19.73	19.34	0.39
1993	922.0	3.79	4.34	1.30	12.52	8.18	3.26	0.46	-0.27	16.79	18.03	-1.24
1994	925.5	1.66	3.59	-0.09	11.98	8.39	3.74	0.48	-0.44	16.33	19.24	-2.91
1995	927.1	2.79	3.27	1.35	11.55	8.28	4.06	0.50	-0.08	16.59	18.72	-2.12
1996	929.6	3.95	3.03	1.69	11.35	8.32	3.46	0.56	-0.07	17.21	18.35	-1.14
1997 PD	933.3	2.57	2.04	0.53	10.65	8.61	3.11	0.64	0.28	16.95	19.17	-2.22
1998 PR	935.7	1.82	1.63	0.19	10.24	8.61	2.20	0.67	0.34	16.23	17.90	-1.68
1999 PR	937.4	4.00	1.35	2.65	10.08	8.73	1.71	0.70	0.63	17.05	16.04	1.01
2000 PR	941.2	1.62	1.06	0.56	9.93	8.87	1.71	0.73	0.27	19.32	20.01	-0.69
2001 PR	942.7	••	••	••	••	••	••	••	••	••	••	••

See notes at the end of Table 1.





Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	646.3	9.49	10.51	1.78	18.18	7.67	2.00	0.66	0.07	28.00	27.63	0.37
1973	652.5	12.97	9.65	6.08	17.40	7.74	2.63	1.03	0.15	34.56	30.23	4.33
1974	661.0	15.19	9.37	8.55	17.18	7.81	3.31	1.05	-0.01	34.37	28.07	6.29
1975	671.1	20.67	9.79	13.56	17.38	7.59	3.09	0.84	0.15	35.63	24.46	11.17
1976	685.2	11.79	9.59	4.21	17.14	7.55	2.54	0.69	-0.03	27.47	25.09	2.38
1977	693.3	7.25	9.10	-0.31	16.55	7.45	1.66	0.70	-0.01	22.22	23.50	-1.27
1978	698.3	4.31	8.01	-2.18	15.42	7.41	0.94	0.75	-0.03	20.48	22.83	-2.35
1979	701.3	4.62	8.07	-1.94	15.43	7.36	1.63	0.57	0.16	20.29	23.44	-3.16
1980	704.6	1.76	7.57	-4.30	15.08	7.51	1.71	0.38	0.28	18.76	24.67	-5.91
1981	705.8	0.08	7.60	-5.66	14.88	7.28	1.40	0.86	0.55	19.61	26.36	-6.75
1982	705.9	8.34	7.47	2.99	14.80	7.33	1.06	0.87	-0.28	20.93	17.85	3.08
1983	711.8	8.67	7.43	3.33	14.71	7.28	0.77	0.60	-0.05	18.41	15.20	3.21
1984	718.0	6.21	7.06	1.22	14.38	7.32	0.83	0.59	-0.15	16.67	15.54	1.13
1985	722.5	2.64	6.76	-2.05	13.99	7.23	0.84	0.70	-0.04	15.94	18.09	-2.16
1986	724.4	1.67	5.97	-3.59	13.50	7.53	0.88	0.67	0.20	15.72	19.71	-4.00
1987	725.6	4.07	5.75	-1.91	13.19	7.44	0.88	0.57	0.20	18.17	20.59	-2.42
1988	728.6	5.45	5.70	-0.49	13.16	7.46	0.93	0.59	0.83	18.76	20.42	-1.66
1989	732.5	6.57	5.68	0.66	13.15	7.48	1.23	0.65	0.10	20.44	20.47	-0.03
1990	737.4	7.91	5.94	1.74	13.27	7.33	1.14	0.63	-0.14	19.13	17.76	1.37
1991	743.2	4.77	5.41	0.12	12.75	7.34	0.92	0.59	-0.10	17.24	17.35	-0.11
1992	746.8	2.28	5.06	-1.33	12.56	7.50	1.01	0.66	-0.22	16.10	17.55	-1.45
1993	748.5	2.37	4.33	-0.51	12.08	7.75	0.93	0.64	-0.15	14.73	15.39	-0.66
1994	750.3	1.83	4.08	-0.80	11.96	7.88	0.83	0.69	-0.28	14.29	14.97	-0.67
1995	751.6	0.93	3.49	-1.12	11.39	7.90	0.84	0.71	-0.01	14.90	16.14	-1.24
1996	752.3	1.58	3.03	-0.85	10.86	7.83	0.95	0.41	-0.18	14.70	15.91	-1.21
1997 PD	753.5	0.92	2.62	-1.70	10.51	7.88	0.88	0.35	0.17	15.17	17.57	-2.40
1998 PR	754.2	-1.01	2.10	-3.11	10.46	8.36	0.99	0.34	0.14	12.85	16.74	-3.89
1999 PR	753.5	2.16	1.82	0.35	10.31	8.50	0.90	0.37	0.67	14.62	15.47	-0.85
2000 PR	755.1	1.27	1.55	-0.28	10.20	8.64	1.00	0.40	0.41	17.15	18.44	-1.29
2001 PR	756.0	**	**	**	**	**	**	**	**	**	**	**

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2001**

**QUEBEC**

[illegible]



**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	6,153.4	6.07	6.69	-0.81	13.55	6.86	3.01	0.71	0.12	5.86	9.08	-3.22
1973	6,190.9	7.97	6.66	1.13	13.52	6.86	4.32	1.10	0.27	6.38	8.75	-2.37
1974	6,240.4	9.30	6.84	2.28	13.66	6.82	5.34	1.12	-0.04	6.27	8.16	-1.89
1975	6,298.7	9.97	7.93	1.86	14.79	6.86	4.43	0.90	0.27	5.44	7.39	-1.95
1976	6,361.8	8.16	8.35	0.53	15.08	6.73	4.58	0.73	-0.07	4.95	8.20	-3.26
1977	6,413.9	1.98	8.37	-5.04	15.14	6.77	3.00	0.74	-0.04	3.80	11.05	-7.25
1978	6,426.6	2.85	8.05	-3.85	14.82	6.77	2.22	0.80	-0.07	3.80	9.00	-5.19
1979	6,445.0	5.26	8.56	-1.96	15.27	6.70	3.02	0.61	0.28	3.66	8.30	-4.65
1980	6,479.0	6.77	8.29	-0.19	14.99	6.69	3.47	0.42	0.50	3.37	7.11	-3.74
1981	6,523.0	6.46	8.04	-0.03	14.57	6.52	3.24	0.56	0.73	3.60	7.05	-3.45
1982	6,565.3	3.32	7.19	-2.17	13.81	6.61	3.24	0.72	-0.42	3.03	7.32	-4.28
1983	6,587.1	4.01	6.65	-0.94	13.36	6.71	2.48	0.77	0.24	3.39	6.28	-2.89
1984	6,613.6	4.82	6.54	-0.04	13.25	6.70	2.21	0.69	0.09	3.81	5.46	-1.65
1985	6,645.5	5.91	6.10	1.49	12.95	6.86	2.23	0.53	0.69	3.81	4.72	-0.90
1986	6,684.9	9.07	5.62	4.07	12.60	6.98	2.90	0.46	2.08	3.87	4.32	-0.45
1987	6,745.8	9.04	5.34	3.58	12.37	7.03	3.96	0.34	1.05	3.84	4.94	-1.09
1988	6,807.1	11.58	5.67	5.78	12.65	6.98	3.77	0.31	3.35	4.07	5.09	-1.02
1989	6,886.4	10.87	6.36	4.39	13.34	6.98	4.94	0.37	1.04	4.25	5.46	-1.21
1990	6,961.7	10.25	7.09	3.03	14.01	6.92	5.84	0.38	-1.05	3.84	5.21	-1.37
1991	7,033.4	7.07	6.83	1.75	13.79	6.96	7.33	0.49	-3.24	3.47	5.32	-1.85
1992	7,083.3	8.50	6.65	4.50	13.52	6.86	6.80	0.41	-0.51	3.58	4.96	-1.38
1993	7,143.7	6.50	5.68	3.46	12.89	7.22	6.27	0.41	-1.37	3.42	4.46	-1.04
1994	7,190.3	4.80	5.44	1.98	12.57	7.13	3.89	0.44	-0.05	3.15	4.57	-1.42
1995	7,224.9	4.71	4.79	2.52	12.07	7.28	3.67	0.46	0.73	3.19	4.61	-1.42
1996	7,259.0	4.21	4.52	0.77	11.72	7.19	4.08	1.02	-0.18	2.87	4.98	-2.11
1997 PD	7,289.6	3.21	3.48	-0.26	10.93	7.45	3.80	1.43	-0.23	2.79	5.19	-2.40
1998 PR	7,313.1	3.24	2.96	0.29	10.36	7.40	3.64	1.47	0.09	2.75	4.73	-1.98
1999 PR	7,336.8	3.65	2.54	1.11	10.02	7.47	3.98	1.54	0.27	2.72	4.31	-1.59
2000 PR	7,363.7	3.34	2.53	0.81	9.75	7.22	4.41	1.62	-0.30	3.26	4.94	-1.68
2001 PR	7,388.4	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.



**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	7,906.4	13.45	8.31	7.64	15.71	7.40	8.02	1.59	0.18	12.19	11.16	1.03
1973	8,013.5	15.65	7.91	10.20	15.33	7.41	12.78	2.43	0.51	12.90	13.55	-0.65
1974	8,139.9	14.67	7.76	9.34	15.15	7.38	14.65	2.46	-0.14	10.91	13.62	-2.70
1975	8,260.2	12.79	7.84	7.34	15.13	7.29	11.84	1.98	0.49	9.74	12.75	-3.01
1976	8,366.5	10.86	7.38	5.51	14.59	7.21	8.56	1.60	-0.20	10.54	11.79	-1.25
1977	8,457.9	11.35	7.21	5.90	14.43	7.22	6.65	1.62	-0.14	11.59	10.58	1.01
1978	8,554.5	8.27	6.97	3.04	14.08	7.11	4.94	1.74	-0.20	10.08	10.03	0.05
1979	8,625.5	8.59	6.95	3.37	14.04	7.10	6.00	1.33	0.46	9.64	11.41	-1.77
1980	8,699.9	8.29	6.93	3.07	14.12	7.18	7.13	0.94	0.87	8.49	12.49	-4.00
1981	8,772.3	10.67	6.73	4.75	13.85	7.13	6.24	1.25	1.99	9.14	11.37	-2.23
1982	8,866.4	13.20	6.85	6.53	13.99	7.14	5.94	1.60	-0.01	9.99	7.79	2.20
1983	8,984.2	13.37	6.89	6.67	14.02	7.13	4.43	1.58	0.19	9.75	6.12	3.63
1984	9,105.1	14.04	7.26	6.96	14.32	7.06	4.53	1.40	-0.17	9.71	5.71	4.00
1985	9,233.9	13.94	7.04	7.08	14.22	7.18	4.38	1.26	0.37	9.50	5.91	3.59
1986	9,363.5	18.27	6.99	11.32	14.17	7.18	5.25	1.09	2.61	10.59	6.05	4.54
1987	9,536.2	21.35	6.90	14.38	13.97	7.07	8.80	0.89	2.30	10.86	6.68	4.18
1988	9,741.9	23.79	6.83	16.89	14.00	7.17	9.03	0.74	7.10	9.27	7.76	1.51
1989	9,976.5	21.61	7.38	14.17	14.41	7.03	10.39	0.82	4.72	8.65	8.77	-0.12
1990	10,194.5	16.03	7.79	8.18	14.69	6.89	11.04	0.80	-0.58	7.32	8.79	-1.47
1991	10,359.2	12.18	7.54	5.82	14.53	7.00	11.40	1.02	-3.60	6.83	7.79	-0.96
1992	10,486.2	13.68	7.33	8.38	14.26	6.93	13.09	0.86	-2.57	6.44	7.72	-1.28
1993	10,630.6	11.24	6.73	6.51	13.83	7.10	12.56	0.87	-3.99	5.83	7.02	-1.19
1994	10,750.8	12.82	6.43	8.37	13.59	7.16	10.84	0.92	-1.13	6.10	6.52	-0.42
1995	10,889.5	12.72	6.19	8.49	13.35	7.16	10.54	0.96	-0.93	6.25	6.41	-0.16
1996	11,029.0	12.15	5.49	7.47	12.62	7.13	10.80	1.82	-1.35	6.04	6.19	-0.15
1997 PD	11,163.8	13.17	4.76	8.42	11.84	7.08	10.50	2.46	-0.22	6.33	5.72	0.61
1998 PR	11,311.8	11.06	4.61	6.45	11.66	7.05	8.11	2.50	-0.17	6.45	5.45	1.01
1999 PR	11,437.6	13.03	4.28	8.76	11.44	7.16	9.04	2.60	0.71	6.45	4.85	1.60
2000 PR	11,587.7	14.73	3.95	10.78	11.24	7.29	11.43	2.70	0.10	7.44	5.50	1.94
2001 PR	11,759.7	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.



**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2001**

**MANITOBA**

[illegible]

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non- permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	998.9	3.68	9.17	-3.34	17.38	8.22	5.26	0.94	0.08	26.09	33.82	-7.73
1973	1,002.6	9.71	8.70	3.15	16.84	8.14	6.57	1.47	0.23	33.53	35.71	-2.18
1974	1,012.4	7.04	8.74	0.41	17.04	8.30	7.31	1.51	-0.07	29.72	35.04	-5.32
1975	1,019.5	8.40	8.56	1.95	16.75	8.19	6.97	1.20	0.22	27.72	31.76	-4.04
1976	1,028.1	6.15	8.21	0.72	16.22	8.01	5.34	0.98	-0.10	24.30	27.84	-3.54
1977	1,034.5	5.13	8.23	0.16	16.12	7.89	4.88	0.99	-0.07	20.78	24.43	-3.65
1978	1,039.8	-2.39	7.80	-6.93	15.79	7.99	3.44	1.07	-0.10	17.97	27.18	-9.20
1979	1,037.3	-4.72	7.75	-9.20	15.69	7.94	4.74	0.81	0.21	18.14	31.48	-13.34
1980	1,032.4	0.32	7.31	-3.71	15.48	8.17	7.44	0.58	0.41	18.44	29.43	-10.98
1981	1,032.8	7.44	7.16	1.46	15.51	8.34	5.18	0.94	0.71	21.87	25.37	-3.49
1982	1,040.5	13.01	7.29	5.41	15.40	8.11	4.71	0.88	0.15	19.94	18.51	1.43
1983	1,054.1	11.93	7.62	4.01	15.66	8.04	3.75	1.04	0.40	17.44	16.54	0.90
1984	1,066.7	10.85	7.80	2.75	15.52	7.73	3.64	0.68	-0.16	16.00	16.05	-0.05
1985	1,078.4	8.63	7.70	0.63	15.79	8.08	3.15	0.78	-0.12	15.90	17.52	-1.62
1986	1,087.7	6.31	7.42	-0.11	15.59	8.17	3.44	0.92	0.16	15.97	18.75	-2.79
1987	1,094.6	4.70	7.51	-0.90	15.45	7.94	4.37	1.02	0.07	16.51	20.84	-4.33
1988	1,099.8	1.58	7.20	-3.72	15.47	8.27	4.55	1.08	0.61	14.65	22.45	-7.80
1989	1,101.5	1.21	7.71	-4.60	15.72	8.00	5.57	1.31	0.21	15.48	24.56	-9.08
1990	1,102.8	3.11	7.69	-2.68	15.71	8.02	6.01	1.02	0.14	15.31	23.11	-7.80
1991	1,106.3	3.61	7.52	-2.99	15.59	8.07	5.09	0.89	-0.35	14.48	21.32	-6.84
1992	1,110.3	4.12	6.84	-2.48	14.91	8.07	4.57	0.93	-0.35	14.31	20.08	-5.77
1993	1,114.9	4.68	6.63	-1.72	14.95	8.32	4.36	1.04	-0.38	13.06	17.72	-4.66
1994	1,120.1	5.09	6.53	-1.21	14.68	8.15	3.67	1.10	-0.20	13.68	17.25	-3.57
1995	1,125.8	4.41	5.72	-1.08	14.28	8.56	3.14	1.14	-0.11	13.75	16.71	-2.96
1996	1,130.8	3.87	5.28	-1.31	13.66	8.38	3.47	1.24	-0.23	12.68	15.97	-3.30
1997 PD	1,135.2	0.83	4.53	-3.70	12.90	8.38	3.32	1.33	0.22	11.60	17.51	-5.91
1998 PR	1,136.1	2.62	4.08	-1.47	12.71	8.63	2.65	1.38	-0.01	13.47	16.19	-2.72
1999 PR	1,139.1	4.08	3.83	0.25	12.55	8.73	3.26	1.45	0.54	12.28	14.37	-2.09
2000 PR	1,143.7	3.25	3.59	-0.34	12.43	8.84	4.05	1.53	0.30	14.18	17.35	-3.16
2001 PR	1,147.5	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.





**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	923.1	-10.38	8.58	-17.62	16.85	8.26	1.65	0.49	0.05	21.22	40.05	-18.83
1973	913.6	-6.64	7.86	-13.16	16.26	8.40	2.05	0.78	0.14	28.75	43.31	-14.56
1974	907.5	3.00	8.04	-3.68	16.63	8.60	2.47	0.80	-0.03	30.81	36.13	-5.32
1975	910.3	16.66	8.27	9.73	16.63	8.36	3.09	0.64	0.14	32.66	25.52	7.14
1976	925.6	13.92	8.75	6.01	17.13	8.38	2.49	0.53	-0.05	28.15	24.05	4.10
1977	938.5	11.18	9.49	2.19	17.53	8.05	2.36	0.54	-0.03	23.52	23.11	0.41
1978	949.1	5.87	9.25	-2.88	17.39	8.14	1.64	0.59	-0.05	20.27	24.16	-3.89
1979	954.7	8.39	9.99	-1.10	17.67	7.69	2.88	0.45	0.13	22.01	25.68	-3.66
1980	962.7	8.36	9.73	-0.88	17.64	7.91	3.72	0.31	0.24	21.37	25.91	-4.53
1981	970.8	11.36	9.92	1.74	17.63	7.71	2.46	0.50	0.31	23.74	24.27	-0.53
1982	981.9	12.77	9.63	3.29	17.93	8.30	2.15	0.59	-0.03	21.29	19.53	1.76
1983	994.5	13.75	10.22	3.68	17.82	7.60	1.73	0.65	0.10	19.44	16.94	2.50
1984	1,008.3	12.46	10.16	2.46	17.75	7.60	2.12	0.57	0.19	17.08	16.36	0.72
1985	1,021.0	6.18	9.89	-3.56	17.73	7.84	1.86	0.79	0.27	15.39	20.28	-4.90
1986	1,027.3	2.63	9.19	-5.02	17.03	7.84	1.81	0.35	0.36	15.48	22.30	-6.82
1987	1,030.0	-0.42	8.96	-6.83	16.54	7.58	2.06	0.46	0.35	15.24	24.03	-8.78
1988	1,029.6	-7.93	8.45	-13.82	16.35	7.90	2.17	0.44	0.39	13.30	29.23	-15.93
1989	1,021.4	-10.46	8.59	-16.47	16.39	7.79	2.11	0.50	0.22	15.02	33.31	-18.29
1990	1,010.8	-8.39	7.99	-13.77	15.99	7.99	2.35	0.40	0.11	15.99	31.81	-15.82
1991	1,002.3	-1.18	7.19	-7.85	15.28	8.08	2.45	0.41	-0.40	17.38	26.86	-9.48
1992	1,001.2	2.35	7.19	-5.81	14.97	7.77	2.50	0.47	-0.14	17.30	25.01	-7.71
1993	1,003.5	4.15	6.07	-2.89	14.19	8.12	2.39	0.48	-0.28	16.20	20.72	-4.52
1994	1,007.7	4.19	5.67	-2.45	13.90	8.23	2.23	0.52	-0.24	16.72	20.64	-3.92
1995	1,011.9	4.32	4.93	-1.57	13.31	8.38	1.90	0.53	0.20	16.70	19.84	-3.15
1996	1,016.3	4.23	4.45	-0.62	13.06	8.61	1.79	0.69	0.12	16.48	18.32	-1.84
1997 PD	1,020.6	2.65	4.13	-1.49	12.58	8.45	1.71	0.88	0.29	16.33	18.94	-2.61
1998 PR	1,023.3	2.79	3.78	-0.99	12.47	8.69	1.54	0.93	0.14	18.28	20.03	-1.74
1999 PR	1,026.2	-2.15	3.59	-5.75	12.40	8.81	1.68	0.98	0.53	13.59	20.56	-6.97
2000 PR	1,024.0	-4.53	3.39	-7.93	12.35	8.95	1.85	1.05	0.24	17.17	26.13	-8.97
2001 PR	1,019.3	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2001**

[illegible]

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	1,680.0	18.21	10.96	7.03	17.27	6.31	4.95	1.93	0.15	35.70	31.85	3.86
1973	1,710.9	16.85	10.74	5.89	16.97	6.24	6.90	2.95	0.38	40.86	39.29	1.56
1974	1,739.9	24.21	10.54	13.45	16.93	6.39	8.11	2.99	-0.08	42.82	34.41	8.41
1975	1,782.6	31.26	11.17	19.88	17.46	6.29	8.99	2.43	0.36	42.35	29.40	12.96
1976	1,839.2	39.19	11.45	24.06	17.62	6.17	7.94	2.00	-0.12	44.51	26.27	18.24
1977	1,912.7	38.60	11.69	20.97	17.64	5.95	6.51	2.05	-0.07	42.46	25.88	16.58
1978	1,988.0	35.66	11.59	18.35	17.49	5.90	4.85	2.20	-0.11	40.79	24.98	15.80
1979	2,060.2	40.69	11.84	23.35	17.60	5.76	6.08	1.69	0.32	45.71	27.06	18.65
1980	2,145.7	46.84	12.31	29.26	18.09	5.78	8.57	1.23	0.56	48.56	27.20	21.36
1981	2,248.7	39.17	13.00	25.26	18.59	5.59	8.43	1.80	1.08	46.91	29.36	17.55
1982	2,338.5	18.55	13.59	6.95	19.08	5.49	7.60	2.16	-0.18	30.81	29.13	1.68
1983	2,382.3	3.18	13.82	-8.68	19.09	5.28	4.48	2.16	0.00	19.23	30.23	-11.00
1984	2,389.9	1.09	13.12	-10.08	18.44	5.32	4.46	1.84	0.09	16.45	29.24	-12.79
1985	2,392.5	9.33	12.72	-1.45	18.23	5.50	3.74	1.73	0.52	20.77	24.75	-3.98
1986	2,414.9	6.00	12.46	-4.86	18.06	5.60	3.99	1.49	1.02	20.44	28.82	-8.38
1987	2,429.4	4.50	11.83	-5.98	17.29	5.47	4.92	1.47	1.90	18.60	29.94	-11.33
1988	2,440.4	14.28	11.46	4.15	17.11	5.65	5.71	1.21	1.91	22.30	24.55	-2.25
1989	2,475.5	17.85	11.81	7.35	17.36	5.55	6.49	1.24	0.75	25.89	24.54	1.35
1990	2,520.1	20.32	11.37	10.25	16.89	5.53	7.44	1.38	-0.16	26.47	22.13	4.34
1991	2,571.8	15.94	10.93	5.57	16.50	5.57	6.55	1.85	-1.26	23.61	21.49	2.13
1992	2,613.1	15.47	10.39	5.13	15.96	5.57	6.72	1.39	-0.59	21.65	21.26	0.39
1993	2,653.9	12.57	9.34	3.27	15.09	5.74	6.95	1.40	-1.40	18.60	19.48	-0.88
1994	2,687.4	12.40	8.94	3.50	14.72	5.77	6.65	1.48	-0.68	18.86	19.85	-0.99
1995	2,721.0	14.04	8.40	5.69	14.20	5.80	5.41	1.53	0.26	19.63	18.08	1.55
1996	2,759.5	16.52	7.71	8.82	13.60	5.89	5.00	1.87	0.28	22.00	16.58	5.42
1997 PD	2,805.4	21.48	7.21	14.27	13.01	5.80	4.56	2.33	0.60	26.26	14.81	11.45
1998 PR	2,866.3	22.94	7.28	15.66	13.07	5.79	3.87	2.36	0.31	29.07	15.23	13.84
1999 PR	2,932.9	15.82	7.05	8.77	12.78	5.74	4.09	2.45	0.47	22.99	16.33	6.66
2000 PR	2,979.6	18.25	6.51	11.74	12.18	5.68	4.76	2.55	0.51	26.58	17.56	9.02
2001 PR	3,034.5	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.





**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	2,278.1	26.02	7.17	18.10	14.97	7.81	8.71	1.53	0.13	31.34	20.54	10.80
1973	2,338.1	30.23	6.85	22.65	14.47	7.62	11.77	2.32	0.34	36.69	23.82	12.86
1974	2,409.9	28.30	6.66	20.93	14.50	7.84	14.11	2.35	-0.09	34.43	25.17	9.27
1975	2,479.1	16.54	6.85	8.99	14.51	7.66	11.71	1.89	0.32	24.46	25.60	-1.15
1976	2,520.4	12.56	6.73	5.83	14.13	7.41	8.08	1.53	-0.13	23.37	23.96	-0.59
1977	2,552.3	16.93	7.03	10.38	14.25	7.22	5.98	1.54	-0.08	24.39	18.36	6.02
1978	2,595.9	17.31	6.94	10.84	14.22	7.28	4.71	1.65	-0.12	24.98	17.07	7.90
1979	2,641.2	24.40	7.19	17.67	14.37	7.18	6.21	1.26	0.30	28.66	16.22	12.43
1980	2,706.4	30.24	7.54	23.15	14.59	7.05	8.89	0.90	0.54	29.09	14.48	14.62
1981	2,789.6	22.92	7.66	15.49	14.70	7.04	7.83	1.14	1.16	24.94	17.30	7.64
1982	2,854.2	11.83	7.68	4.23	14.89	7.21	6.62	1.46	-0.23	15.98	16.69	-0.70
1983	2,888.2	12.91	7.94	5.03	14.76	6.82	4.97	1.51	0.19	15.11	13.73	1.39
1984	2,925.7	11.95	7.89	4.12	14.92	7.03	4.48	1.67	0.12	14.27	13.08	1.19
1985	2,960.9	9.34	7.34	2.07	14.50	7.16	4.11	1.57	0.60	14.31	15.38	-1.08
1986	2,988.7	11.52	6.90	4.57	13.96	7.06	4.18	1.41	1.50	16.47	16.17	0.30
1987	3,023.3	19.53	6.55	12.85	13.70	7.14	6.20	1.04	1.92	19.95	14.18	5.77
1988	3,082.9	24.32	6.53	17.66	13.76	7.22	7.44	0.78	2.72	21.63	13.34	8.29
1989	3,158.8	28.11	6.48	21.50	13.66	7.18	7.91	0.87	2.80	24.77	13.11	11.66
1990	3,248.9	27.19	6.69	20.38	13.85	7.16	8.72	0.94	0.85	23.80	12.05	11.75
1991	3,338.5	25.33	6.40	17.56	13.49	7.09	9.49	1.08	-1.07	22.02	11.80	10.22
1992	3,424.1	29.19	6.20	20.79	13.28	7.08	10.56	0.95	-0.21	22.62	11.23	11.39
1993	3,525.5	28.89	5.66	21.09	12.87	7.20	12.78	0.97	-1.23	21.03	10.52	10.51
1994	3,628.9	29.51	5.72	21.72	12.76	7.04	13.32	0.99	0.04	20.23	10.88	9.35
1995	3,737.6	25.64	5.40	18.23	12.37	6.97	11.70	1.00	1.35	17.72	11.54	6.18
1996	3,834.7	22.92	4.80	17.30	11.89	7.10	13.42	1.41	0.70	16.17	11.58	4.59
1997 PD	3,923.6	15.54	4.34	11.20	11.27	6.93	12.02	1.80	0.48	13.66	13.16	0.50
1998 PR	3,985.0	6.48	3.78	2.71	10.77	7.00	9.01	1.88	-0.04	11.63	16.01	-4.38
1999 PR	4,010.9	8.41	3.45	4.95	10.42	6.97	8.97	1.99	1.05	10.82	13.90	-3.08
2000 PR	4,044.8	6.84	3.25	3.58	9.97	6.72	9.22	2.10	0.73	11.72	15.98	-4.26
2001 PR	4,072.5	**	**	**	**	**	**	**	**	**	**	**

See notes at the end of Table 1.





Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	19.7	53.78	17.17	32.32	22.25	5.08	5.72	1.92	0.15	138.94	110.57	28.37
1973	20.8	7.61	14.79	-11.34	20.10	5.31	4.31	2.97	0.19	109.42	122.29	-12.88
1974	21.0	28.53	17.91	6.53	23.27	5.36	4.70	2.73	0.00	130.67	126.11	4.56
1975	21.6	31.02	13.50	13.50	18.61	5.11	4.43	2.19	0.23	125.46	114.42	11.04
1976	22.3	12.72	14.51	-14.15	20.00	5.49	3.26	1.79	0.00	114.32	129.95	-15.62
1977	22.5	35.21	14.29	2.92	18.87	4.58	2.27	1.83	0.00	122.28	119.79	2.48
1978	23.4	25.49	15.14	-7.10	18.90	3.76	2.41	1.99	0.00	112.16	119.69	-7.53
1979	24.0	15.82	15.49	-16.81	20.75	5.26	2.86	1.37	0.21	98.53	117.04	-18.51
1980	24.3	17.11	14.18	-13.89	19.39	5.21	3.91	1.10	0.37	93.45	110.52	-17.07
1981	24.8	-22.67	16.14	-52.21	21.90	5.76	4.49	1.84	1.35	110.58	166.79	-56.21
1982	24.2	-23.20	17.01	-51.37	21.94	4.93	2.88	2.30	-1.46	67.80	118.29	-50.49
1983	23.6	-3.52	18.09	-32.96	22.88	4.79	3.09	1.44	-0.38	65.96	100.19	-34.23
1984	23.6	24.77	17.23	-3.65	21.75	4.53	1.72	0.92	0.21	66.60	71.25	-4.65
1985	24.2	8.74	14.06	-16.36	19.13	5.07	1.48	0.82	1.32	65.37	83.71	-18.34
1986	24.4	31.47	14.95	7.55	19.51	4.56	1.98	0.77	-0.89	88.50	81.27	7.23
1987	25.1	28.73	14.50	6.82	18.74	4.23	3.14	0.82	0.59	90.50	86.59	3.92
1988	25.9	36.72	14.60	14.91	19.76	5.16	2.58	0.87	-0.04	92.90	79.66	13.24
1989	26.8	24.07	14.17	2.94	17.66	3.50	3.68	0.74	1.10	85.23	86.33	-1.10
1990	27.5	23.47	15.85	0.79	19.98	4.13	2.87	1.15	0.00	79.89	80.82	-0.93
1991	28.2	41.36	15.79	19.83	19.76	3.97	2.92	1.36	1.63	81.78	65.15	16.63
1992	29.3	28.42	13.84	9.57	17.77	3.93	4.47	1.44	-0.67	78.45	71.22	7.22
1993	30.2	-6.41	12.79	-24.13	16.88	4.09	3.42	1.03	-1.43	54.40	79.49	-25.09
1994	30.0	9.89	10.55	-5.57	14.66	4.11	3.88	1.06	-0.27	59.35	67.47	-8.13
1995	30.3	38.62	10.13	23.70	15.22	5.08	2.82	1.10	0.74	74.72	53.48	21.24
1996	31.5	20.03	10.16	7.92	13.93	3.77	2.74	1.45	-0.13	59.93	53.17	6.76
1997 PD	32.1	-6.46	10.96	-17.43	14.80	3.84	2.72	2.28	-0.44	50.90	68.33	-17.43
1998 PR	31.9	-27.18	8.29	-35.47	12.58	4.29	1.97	2.64	0.57	48.21	83.58	-35.38
1999 PR	31.1	-12.02	7.87	-19.89	12.28	4.40	2.46	2.88	0.00	41.55	61.02	-19.47
2000 PR	30.7	-18.55	7.47	-26.01	12.10	4.64	1.94	3.12	-0.10	43.97	68.70	-24.73
2001 PR	30.1	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2001**

**NORTHWEST TERRITORIES (Nunavut included until 1991)**

[illegible]

Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	37.8	55.93	24.84	27.64	31.83	6.99	4.86	0.31	-0.03	113.20	90.07	23.12
1973	40.0	20.58	23.62	-6.36	29.78	6.16	4.40	0.49	0.02	88.53	98.82	-10.29
1974	40.8	31.21	20.15	7.83	25.11	4.96	4.82	0.55	-0.10	104.82	101.15	3.66
1975	42.1	38.36	22.32	12.92	27.35	5.03	4.49	0.42	0.00	100.13	91.29	8.84
1976	43.8	13.05	22.03	-14.73	26.84	4.81	4.02	0.29	-0.11	92.98	111.31	-18.33
1977	44.4	9.60	22.25	-20.24	26.74	4.49	2.74	0.31	-0.11	98.06	120.60	-22.55
1978	44.8	10.13	22.19	-19.55	26.74	4.55	2.53	0.38	-0.11	85.59	107.18	-21.59
1979	45.2	15.22	23.64	-15.84	28.14	4.50	3.05	0.29	-0.02	81.24	99.82	-18.58
1980	45.9	12.01	23.02	-18.30	28.17	5.15	2.01	0.22	0.02	72.96	93.08	-20.12
1981	46.5	36.98	23.35	6.33	27.49	4.14	1.92	0.19	0.91	89.30	85.60	3.69
1982	48.2	43.06	22.92	13.04	27.62	4.71	2.25	0.95	0.57	76.92	65.75	11.17
1983	50.4	31.02	24.43	-0.27	29.14	4.71	1.15	0.47	-0.27	66.41	67.10	-0.68
1984	52.0	31.26	22.87	1.74	27.36	4.49	1.42	0.49	-0.15	67.14	66.18	0.97
1985	53.6	18.54	22.60	-10.55	26.56	3.96	1.31	0.98	-0.07	63.17	73.98	-10.81
1986	54.6	-1.72	23.31	-33.01	27.62	4.31	1.23	0.88	0.04	56.61	90.01	-33.39
1987	54.5	12.70	24.17	-20.52	27.76	3.59	1.31	0.42	0.07	63.92	85.41	-21.49
1988	55.2	20.77	23.93	-12.04	27.87	3.94	1.36	0.70	1.24	63.20	77.14	-13.94
1989	56.4	24.57	21.55	-5.68	25.91	4.36	1.75	1.35	0.39	65.34	71.80	-6.47
1990	57.8	33.04	23.10	1.50	26.96	3.86	1.28	0.92	1.24	63.90	64.01	-0.10
1991	59.7	38.90	28.29	3.87	33.09	4.80	2.51	0.24	-0.08	73.95	72.27	1.68
1992	39.1	13.61	18.11	-5.42	21.67	3.56	2.31	0.46	-1.68	73.22	78.81	-5.59
1993	39.6	19.39	17.31	1.03	20.86	3.55	3.43	0.75	-0.58	65.09	66.16	-1.08
1994	40.4	20.77	16.72	3.04	20.20	3.48	3.06	1.01	-0.86	68.43	66.59	1.84
1995	41.2	9.18	17.97	-9.64	21.11	3.14	2.10	1.21	0.10	60.36	70.99	-10.63
1996	41.6	1.47	15.81	-14.94	19.44	3.63	1.97	1.54	0.05	57.21	72.63	-15.42
1997 PD	41.7	-5.34	14.08	-19.43	17.40	3.32	2.02	1.54	0.43	58.04	78.38	-20.34
1998 PR	41.4	-12.26	12.99	-25.26	16.54	3.55	1.31	1.65	0.70	56.27	81.89	-25.62
1999 PR	40.9	1.90	12.77	-10.86	16.36	3.59	1.49	1.83	0.63	56.90	68.06	-11.16
2000 PR	41.0	-1.71	12.94	-14.65	16.65	3.71	2.00	2.05	1.12	65.10	80.82	-15.72
2001 PR	40.9	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.





Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	...	...	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...	...	...
1975	...	...	...	...	...	...	...	...	...	...	...	...
1976	...	...	...	...	...	...	...	...	...	...	...	...
1977	...	...	...	...	...	...	...	...	...	...	...	...
1978	...	...	...	...	...	...	...	...	...	...	...	...
1979	...	...	...	...	...	...	...	...	...	...	...	...
1980	...	...	...	...	...	...	...	...	...	...	...	...
1981	...	...	...	...	...	...	...	...	...	...	...	...
1982	...	...	...	...	...	...	...	...	...	...	...	...
1983	...	...	...	...	...	...	...	...	...	...	...	...
1984	...	...	...	...	...	...	...	...	...	...	...	...
1985	...	...	...	...	...	...	...	...	...	...	...	...
1986	...	...	...	...	...	...	...	...	...	...	...	...
1987	...	...	...	...	...	...	...	...	...	...	...	...
1988	...	...	...	...	...	...	...	...	...	...	...	...
1989	...	...	...	...	...	...	...	...	...	...	...	...
1990	...	...	...	...	...	...	...	...	...	...	...	...
1991	...	...	...	...	...	...	...	...	...	...	...	...
1992	22.6	29.79	25.56	-3.62	30.62	5.06	0.87	0.44	-0.52	41.97	45.50	-3.53
1993	23.3	34.05	25.65	1.01	30.63	4.99	1.44	0.46	-0.13	40.60	40.43	0.17
1994	24.1	28.83	26.90	-5.24	30.95	4.05	0.98	0.25	-0.29	38.77	44.47	-5.69
1995	24.8	23.77	25.61	-9.05	29.47	3.87	0.36	0.08	0.00	33.86	43.19	-9.33
1996	25.4	16.69	24.70	-10.55	29.43	4.73	0.39	1.25	0.04	34.90	44.64	-9.73
1997 PD	25.8	13.05	24.07	-11.01	28.69	4.62	0.69	1.66	0.15	35.66	45.87	-10.21
1998 PR	26.1	18.16	19.90	-1.74	25.29	5.38	0.34	1.74	0.19	39.01	39.54	-0.53
1999 PR	26.6	17.54	20.04	-2.50	25.51	5.47	0.22	1.94	-0.60	37.87	38.06	-0.19
2000 PR	27.1	20.57	20.21	0.37	25.69	5.48	0.40	2.05	0.18	47.79	45.97	1.83
2001 PR	27.7	...	...	...	...	...	...	...	...	...	...	...

See notes at the end of Table 1.

Table A2. Number of Marriages and Crude Marriage Rate, Canada, Provinces and Territories, 1981, 1986-1998

Year	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T. <sup>1</sup>	Canada
Number of Marriages													
1981	3,758	849	6,632	5,108	41,005	70,281	8,123	7,329	21,781	24,699	235	282	190,082
1986	3,421	970	6,445	4,962	33,083	70,839	7,816	6,820	18,896	21,826	183	257	175,518
1987	3,481	924	6,697	4,924	32,616	76,201	7,994	6,853	18,640	23,395	189	237	182,151
1988	3,686	965	6,894	5,292	33,519	78,533	7,908	6,767	19,272	24,461	209	222	187,728
1989	3,905	1,019	6,828	5,254	33,325	80,377	7,800	6,637	19,888	25,170	214	223	190,640
1990	3,791	996	6,386	5,044	32,060	80,097	7,666	6,229	19,806	25,216	218	228	187,737
1991	3,480	876	5,845	4,521	28,922	72,938	7,032	5,923	18,612	23,691	196	215	172,251
1992	3,254	850	5,623	4,313	25,841	70,079	6,899	5,664	17,871	23,749	221	209	164,573
1993	3,163	885	5,403	4,177	25,021	66,575	6,752	5,638	17,860	23,447	180	216	159,317
1994	3,318	850	5,373	4,219	24,986	66,693	6,585	5,689	18,096	23,739	169	241	159,958
1995	3,404	877	5,329	4,252	24,238	67,583	6,703	5,799	18,044	23,597	207	218	160,251
1996	3,194	924	5,392	4,366	23,968	66,208	6,448	5,671	17,283	22,834	197	206	156,691
1997	3,227	876	5,177	4,089	23,958	64,535	6,261	5,707	17,254	21,845	167	210	153,306
1998	3,150	882	5,134	4,063	22,940	64,533	6,437	5,740	17,813	21,749	167	213	152,821
Crude Marriage Rate (per 1,000)													
1981	6.54	6.86	7.76	7.23	6.26	7.98	7.84	7.51	9.49	8.75	9.83	5.93	7.66
1986	5.93	7.55	7.25	6.84	4.93	7.51	7.16	6.63	7.77	7.27	7.48	4.70	6.72
1987	6.05	7.19	7.50	6.76	4.81	7.90	7.28	6.64	7.65	7.67	7.35	4.31	6.89
1988	6.41	7.46	7.68	7.25	4.90	7.98	7.18	6.58	7.85	7.85	7.85	3.99	7.01
1989	6.77	7.83	7.55	7.15	4.81	7.95	7.07	6.51	7.97	7.87	7.89	3.91	6.99
1990	6.56	7.63	7.02	6.82	4.58	7.78	6.93	6.18	7.77	7.66	7.85	3.87	6.78
1991	6.00	6.72	6.39	6.06	4.09	6.99	6.34	5.91	7.18	7.02	6.78	5.56	6.15
1992	5.61	6.49	6.12	5.76	3.63	6.63	6.20	5.64	6.78	6.84	7.31	5.30	5.80
1993	5.45	6.69	5.85	5.57	3.49	6.23	6.04	5.60	6.69	6.56	5.88	5.41	5.55
1994	5.77	6.36	5.80	5.62	3.47	6.16	5.86	5.63	6.69	6.45	5.62	5.93	5.51
1995	5.99	6.51	5.74	5.66	3.35	6.16	5.93	5.72	6.59	6.24	6.70	5.25	5.46
1996	5.70	6.78	5.79	5.80	3.30	5.96	5.68	5.56	6.22	5.88	6.17	4.92	5.28
1997	5.82	6.40	5.54	5.42	3.28	5.74	5.51	5.58	6.08	5.52	5.18	5.03	5.11
1998	5.78	6.44	5.48	5.39	3.13	5.67	5.66	5.60	6.13	5.44	5.30	5.19	5.05

<sup>1</sup> Nunavut included.

Source: Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.



Table A3. Age-specific First Marriage Rates (per 1,000) by Age, Sex and Year of Birth, Canada

MALES

Age	Year of Birth											
	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970
	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958
Year of 17th Birthday												
	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987
	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975
17	0.1											
18		0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5
19		1.4	1.4	1.6	1.7	1.7	1.8	2.2	2.3	2.7	2.6	2.7
20			1.4	1.4	4.6	5.0	5.1	5.2	5.8	6.5	7.1	7.4
21				8.4	8.8	8.9	10.0	10.8	10.5	12.4	13.8	15.1
22					14.2	15.0	16.2	18.0	18.8	19.0	21.1	23.2
23						21.8	23.0	23.7	26.6	27.8	28.2	30.6
24							29.5	31.2	33.7	35.8	36.6	37.7
25								37.8	39.0	40.9	44.0	44.8
26									44.4	44.7	47.9	48.5
27										46.3	47.2	47.3
28											46.0	44.3
29												40.9
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
41												
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Sources: Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.

Table A3. Age-specific First Marriage Rates (per 1,000) by Age, Sex and Year of Birth, Canada - Concluded

FEMALES

Age	Year of Birth																																							
	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949					
	Year of 15th Birthday																																							
15	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.4	0.6	0.6	0.5	0.6	0.6	1.1	2.0	2.4	2.4	2.4	2.7	3.5	3.4	3.3	3.5	3.5	3.2	3.3	3.4	3.4	4.1			
16		0.6	0.6	0.6	0.9	1.0	1.1	1.3	1.5	1.6	2.0	2.2	2.4	2.2	2.4	3.0	3.6	3.9	4.6	4.9	5.8	6.5	7.7	9.1	11.2	13.7	15.6	17.1	18.2	17.3	17.7	16.7	15.7	16.5	16.8	17.6				
17		1.6	1.7	2.1	2.6	2.8	3.1	3.8	4.7	4.9	5.5	6.0	7.5	8.3	9.5	10.9	12.5	15.0	16.8	19.3	23.2	26.9	32.4	35.3	38.9	40.9	39.2	40.6	38.6	39.7	40.8	38.6	39.7	40.8	41.0					
18			6.8	7.6	8.3	9.2	9.6	10.5	11.0	13.3	15.3	16.1	16.6	18.1	21.6	24.1	25.4	29.3	33.7	38.0	44.0	48.5	53.1	60.0	66.4	75.5	79.8	84.5	89.5	82.8	82.7	82.0	81.7	84.5						
19				13.5	14.5	15.3	17.3	18.9	18.4	21.2	23.5	26.3	29.4	31.5	32.5	37.5	40.2	43.4	48.3	54.8	61.6	68.0	71.8	77.0	82.8	88.3	97.8	102.8	111.2	108.7	108.7	108.6	110.3							
20					21.9	22.5	24.6	26.5	28.8	29.4	31.5	36.1	41.1	45.5	46.1	48.0	50.7	56.6	59.6	64.7	72.8	77.9	83.6	86.4	89.2	92.9	93.3	104.3	111.1	118.0	125.2	121.8	121.5	126.1						
21						29.6	31.6	33.9	37.4	39.0	40.1	42.5	47.7	54.6	57.8	59.8	60.1	61.7	67.2	71.4	72.4	71.0	71.5	73.1	75.7	75.5	76.4	73.6	74.4	74.9	82.1	85.9	91.3	96.3	96.9					
22							37.7	38.9	42.0	45.4	47.9	48.6	51.5	56.7	64.0	65.4	66.4	64.8	67.2	70.2	71.0	66.6	66.0	64.4	65.1	64.3	63.9	62.4	59.9	60.4	60.4	58.7	63.7	65.5	68.0	71.0				
23								46.4	47.3	50.5	52.2	54.2	54.8	58.1	62.5	67.2	67.3	65.0	62.6	59.0	56.8	57.8	56.3	53.9	53.3	50.9	50.9	48.3	46.2	45.7	44.8	48.6	48.8	49.1						
24									50.5						53.4	54.6	54.9	57.6	56.9	54.9	50.8	47.5	48.4	45.8	41.6	40.7	39.6	37.1	35.6	35.1	34.4	35.7	35.4							
25																57.9	59.8	65.3	65.0	62.6	59.0	56.8	57.8	56.3	53.9	53.3	50.9	48.3	46.2	45.7	44.8	48.6	48.8	49.1						
26																	53.4	54.6	54.9	57.6	56.9	54.9	50.8	47.5	48.4	45.8	41.6	40.7	39.6	37.1	35.6	35.1	34.4	35.7	35.4					
27																		45.7	45.3	47.0	48.7	46.2	43.9	39.2	38.1	38.8	36.1	34.1	32.4	30.8	29.3	28.4	26.9	27.3	26.4	26.5				
28																			37.6	38.0	38.3	39.6	36.2	35.3	32.0	29.6	29.3	28.2	26.0	25.2	23.9	23.7	21.5	21.0	20.4	19.9				
29																				31.9	30.9	31.4	29.5	27.5	25.3	22.1	22.7	22.0	20.2	19.2	18.2	17.5	16.4	15.9	15.2					
30																					27.2	27.1	26.0	24.4	24.8	23.3	22.2	19.7	17.2	16.8	15.9	15.3	13.6	12.6	12.2					
31																						29.0	27.2	24.8	24.4	20.0	19.1	16.8	15.3	13.8	14.1	13.6	12.2	11.2	10.6	9.7				
32																							23.9	22.8	22.1	20.0	19.1	16.8	15.3	13.8	14.1	13.6	12.2	11.2	10.6	9.7				
33																								18.3	17.3	16.7	16.1	15.5	14.5	13.4	11.4	10.4	10.5	10.3	9.5	8.8	8.5	7.7		
34																									14.7	14.1	13.8	12.6	12.1	11.8	11.1	10.2	9.1	7.8	8.2	7.5	7.0	6.4		
35																										11.9	11.6	11.2	10.2	9.9	9.4	9.1	8.8	8.1	7.2	6.5	6.7	5.4	5.4	
36																											9.4	9.1	8.3	8.5	7.9	7.5	6.9	6.3	5.7	5.4	5.1	4.5		
37																												7.8	7.3	7.0	6.6	6.4	6.3	6.1	5.7	5.4	5.1	4.2	3.9	
38																													6.4	6.2	5.9	5.7	5.3	5.1	4.8	5.1	4.8	4.4	3.8	3.4
39																														4.8	5.0	4.8	4.6	4.2	4.0	3.7	3.8	3.5	3.2	2.6
40																															4.1	3.9	3.8	3.2	3.6	3.3	3.1	2.8	2.5	
41																																3.7	3.3	3.2	3.0	2.8	2.8	2.6	2.2	2.2
42																																	3.0	2.5	2.8	2.5	2.4	2.2	2.0	2.0
43																																		2.4	2.2	2.1	1.9	1.7	1.6	1.5
44																																			2.1	1.7	1.6	1.4	1.6	1.5
45																																				2.1	1.7	1.6	1.4	1.5

Sources: Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.

**Table A4. Number of Divorces and Mean Duration of Marriages for Persons Divorced in the Year, Canada, Provinces and Territories, 1981, 1986, 1989-1998**

Year	Nfld. Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T. <sup>2</sup>	Canada
Number of Divorces													
1981	569	187	2,285	1,334	19,193	21,680	2,399	1,932	8,418	9,533	75	66	67,671
1986	687	199	2,609	1,729	19,026	27,549	2,982	2,479	9,556	11,299	94	95	78,304
1989	1,005	248	2,527	1,649	19,829	31,298	2,912	2,460	8,237	10,658	82	93	80,998
1990	1,016	281	2,419	1,699	20,474	28,977	2,798	2,364	8,489	9,773	81	92	78,463
1991	912	269	2,280	1,652	20,274	27,694	2,790	2,240	8,388	10,368	67	86	77,020
1992	867	227	2,304	1,633	19,695	30,463	2,657	2,325	8,217	10,431	117	98	79,034
1993	930	227	2,376	1,606	19,662	28,903	2,586	2,239	8,612	10,889	94	102	78,226
1994	933	249	2,286	1,570	18,224	30,718	2,746	2,354	8,174	11,437	97	92	78,880
1995	982	260	2,294	1,456	20,133	29,352	2,677	2,320	7,599	10,357	112	94	77,636
1996	1,060	237	2,228	1,450	18,078	25,035	2,603	2,216	7,509	10,898	115	99	71,528
1997	822	243	1,983	1,373	17,478	23,629	2,625	2,198	7,185	9,692	101	79	67,408
1998	944	279	1,933	1,473	16,916	25,149	2,443	2,246	7,668	9,827	117	93	69,088
Mean Duration of Marriage for Persons Divorced in the Year <sup>1</sup>													
1981	11.8	12.4	11.3	11.8	11.8	11.9	11.0	10.5	10.5	11.7	11.2	9.0	11.5
1986	11.7	12.5	11.3	11.8	11.5	11.7	11.1	10.7	10.9	12.1	11.8	10.9	11.5
1989	11.7	11.5	11.3	11.5	11.0	11.3	10.3	10.8	11.0	11.5	11.5	10.5	11.2
1990	11.3	11.9	11.3	11.1	10.8	11.2	10.5	10.6	11.0	11.5	11.4	10.1	11.1
1991	11.4	12.8	11.0	11.4	11.0	10.9	10.3	10.8	10.8	11.3	11.1	9.0	11.0
1992	10.9	12.0	11.2	11.0	10.7	10.9	10.4	10.6	10.8	11.1	10.7	9.3	10.9
1993	11.7	11.8	10.9	11.5	10.5	10.8	10.4	10.6	10.6	10.9	10.6	10.0	10.7
1994	11.3	12.4	11.0	11.1	10.6	10.6	10.4	10.5	10.6	10.7	10.8	10.7	10.7
1995	11.2	12.1	11.1	11.5	10.4	10.8	10.5	10.6	10.8	10.6	10.1	10.1	10.7
1996	11.3	12.2	11.3	11.5	10.4	11.0	10.5	10.6	10.5	10.6	10.2	10.0	10.8
1997	12.0	11.7	11.4	11.4	10.7	10.9	10.5	10.3	10.7	10.7	11.0	9.4	10.9
1998	12.2	12.7	11.6	11.3	10.4	10.8	10.5	10.6	10.8	10.7	10.8	10.7	10.8

<sup>1</sup> Excludes divorces for marriages of a duration greater than 25 years.

<sup>2</sup> Nunavut included.

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.





Year	Number of Marriages per Year	Marriage Cohort	Number of Marriages	Marriage Duration (in years)																									Year of Observation	T.D.R. <sup>1</sup>	
				0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			25
1973	199,064	1972-73	199,767	5	36	83	129	181	203	212	211	206	204	180	155	135	152	175	138	126	111	103	99	93	89	83	74	71	67	1998	3,399
1974	198,824	1973-74	198,944	5	44	94	136	184	213	227	229	218	189	168	146	160	184	149	129	111	106	104	97	87	89	78	70	70			
1975	198,085	1974-75	198,455	6	52	104	147	199	224	242	233	214	185	163	171	196	150	139	130	110	110	102	93	90	82	77	70				
1976	193,343	1975-76	195,714	8	59	111	161	217	251	246	227	194	165	195	207	165	152	131	119	113	112	103	98	86	80	76					
1977	187,344	1976-77	190,344	8	63	116	162	227	250	240	208	180	200	225	181	158	143	125	117	113	105	100	88	82	77						
1978	185,523	1977-78	186,434	7	65	123	175	235	250	221	200	230	248	196	175	155	135	130	116	107	107	90	80	82							
1979	187,811	1978-79	186,667	8	58	132	185	226	226	211	252	274	211	185	164	148	140	126	118	114	97	88	85								
1980	191,069	1979-80	189,440	7	65	135	176	206	210	268	297	227	207	184	165	148	142	131	118	105	92	92									
1981	190,082	1980-81	190,576	8	71	133	154	190	269	316	250	218	189	179	161	150	134	129	110	105	96										
1982	188,360	1981-82	189,221	9	65	118	144	260	326	263	232	216	190	177	160	153	135	119	104	103											
1983	184,675	1982-83	186,518	8	64	109	209	322	273	247	219	197	183	172	158	140	128	111	109												
1984	185,597	1983-84	185,136	8	63	150	270	263	253	237	209	202	184	171	151	135	117	112													
1985	184,096	1984-85	184,847	8	72	212	249	260	251	226	219	201	187	170	146	123	122														
1986	175,518	1985-86	179,807	10	103	217	265	263	246	237	222	203	182	163	143	140															
1987	182,151	1986-87	178,835	20	106	216	251	255	251	235	218	196	171	149	140																
1988	187,728	1987-88	184,940	19	106	214	248	254	243	237	216	175	158	150																	
1989	190,640	1988-89	189,184	19	109	208	265	268	256	231	193	170	168																		
1990	187,737	1989-90	189,189	17	113	230	272	270	257	213	181	178																			
1991	172,251	1990-91	179,994	19	120	232	276	274	232	205	200																				
1992	164,573	1991-92	168,412	21	121	242	270	246	216	212																					
1993	159,317	1992-93	161,945	22	132	236	246	228	221																						
1994	159,958	1993-94	159,638	22	129	222	230	241																							
1995	160,251	1994-95	160,105	20	113	203	241																								
1996	156,691	1995-96	158,471	16	106	218																									
1997	153,306	1996-97	154,999	16	112																										
1998	152,821	1997-98	153,064	15																											

<sup>1</sup> Total Divorce Rate.  
**Sources:** Statistics Canada, Health Statistics Division and Demography Division, Demographic Estimates Section.

**Table A6. Number of Live Births and Total Fertility Rate, Canada, Provinces and Territories, 1986-1999**

Year	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nvt.	Canada
Number of Live Births														
1986	7,618	1,928	12,358	9,788	84,634	133,882	17,009	17,513	43,744	41,967	483	830	677	372,431
1987	7,468	1,955	12,110	9,588	83,791	134,617	16,953	17,034	42,110	41,814	478	843	680	369,441
1988	6,435	1,977	12,182	9,617	86,612	138,066	17,030	16,763	42,055	42,930	521	853	702	375,743
1989	7,026	1,937	12,533	9,667	92,373	145,338	17,321	16,651	43,351	43,769	480	819	660	391,925
1990	6,787	2,014	12,870	9,824	98,048	150,923	17,352	16,090	43,004	45,617	556	902	682	404,669
1991	7,166	1,885	12,016	9,497	97,310	151,478	17,282	15,304	42,776	45,612	568	911	723	402,533
1992	6,918	1,850	11,874	9,389	96,146	150,593	16,590	15,004	42,039	46,156	529	852	702	398,643
1993	6,421	1,754	11,568	9,049	92,391	147,848	16,709	14,269	40,292	46,026	508	834	725	388,394
1994	6,339	1,716	11,099	8,978	90,578	147,068	16,480	14,038	39,796	46,998	442	824	756	385,114
1995	5,859	1,754	10,726	8,563	87,417	146,263	16,113	13,499	38,914	46,820	470	874	739	378,016
1996	5,747	1,694	10,573	8,176	85,226	140,012	15,478	13,300	37,851	46,138	443	815	747	366,200
1997	5,416	1,591	9,952	7,922	79,774	133,004	14,655	12,860	36,905	44,577	474	723	745	348,598
1998	4,994	1,504	9,595	7,885	75,856	132,618	14,461	12,777	37,905	43,072	396	681	667	342,418
1999	5,055	1,515	9,575	7,615	73,596	131,080	14,315	12,604	38,171	41,939	383	659	737	337,249
Total Fertility Rate (woman aged 15-49) <sup>1</sup>														
1986	..	1.79	1.59	1.53	1.38	1.60	1.83	2.03	1.86	1.62	1.95	2.85	..	1.60
1987	..	1.83	1.56	1.51	1.37	1.58	1.83	1.99	1.83	1.62	1.90	2.86	..	1.58
1988	..	1.86	1.57	1.53	1.43	1.60	1.85	2.00	1.85	1.65	2.00	2.94	..	1.61
1989	..	1.84	1.63	1.56	1.53	1.64	1.92	2.06	1.92	1.66	1.87	2.73	..	1.67
1990	..	1.94	1.68	1.59	1.64	1.68	1.95	2.08	1.90	1.70	2.19	2.83	..	1.72
1991	1.44	1.86	1.59	1.55	1.65	1.67	1.97	2.04	1.90	1.69	2.15	2.47	3.55	1.71
1992	1.40	1.85	1.59	1.56	1.67	1.69	1.93	2.04	1.88	1.68	1.93	2.30	3.37	1.71
1993	1.32	1.76	1.57	1.53	1.64	1.67	1.97	1.98	1.82	1.64	1.89	2.23	3.43	1.68
1994	1.34	1.73	1.54	1.55	1.64	1.67	1.97	1.97	1.82	1.64	1.73	2.23	3.51	1.68
1995	1.28	1.79	1.52	1.51	1.61	1.67	1.95	1.91	1.79	1.61	1.82	2.34	3.41	1.66
1996	1.30	1.73	1.52	1.46	1.60	1.61	1.89	1.89	1.74	1.55	1.67	2.25	3.37	1.62
1997	1.27	1.63	1.45	1.43	1.52	1.53	1.81	1.83	1.68	1.48	1.82	2.02	3.36	1.55
1998	1.21	1.56	1.42	1.45	1.47	1.53	1.81	1.81	1.71	1.45	1.60	1.97	2.98	1.54
1999	1.26	1.58	1.43	1.42	1.45	1.52	1.81	1.81	1.70	1.42	1.59	1.92	3.25	1.52

<sup>1</sup> Number of children per woman.

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.



**Table A7. Fertility Rate (per 1,000) by Birth Order and by Age Group, Canada, Provinces and Territories, 1997-1999**

Year	Nfld Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nvt.	Canada
By Birth Order														
1997: 1	17.0	19.5	18.1	18.4	18.4	19.0	20.9	19.3	19.4	19.0	21.3	23.2	32.3	18.9
2	12.9	15.1	14.5	14.3	14.9	16.3	16.4	16.3	16.9	15.2	18.1	19.6	27.4	15.7
3	3.9	7.6	5.4	4.9	5.6	6.4	7.9	9.0	7.2	5.5	7.2	9.5	19.4	6.2
4	0.9	1.7	1.6	1.4	1.7	1.9	3.2	3.8	2.7	1.7	2.8	4.7	14.9	2.0
5 +	0.5	1.2	0.7	0.5	0.8	1.0	2.7	2.8	1.8	0.8	1.2	4.1	21.2	1.1
1998: 1	16.2	17.6	17.4	18.1	17.8	18.8	20.8	19.2	19.8	18.4	17.5	22.4	29.0	18.6
2	12.3	15.2	14.2	14.9	14.5	16.2	15.6	16.2	16.8	14.7	17.2	16.6	24.7	15.5
3	3.6	6.9	5.2	4.9	5.0	6.3	7.9	8.6	7.4	5.3	5.9	10.9	16.1	6.0
4	0.8	2.2	1.5	1.3	1.5	1.9	3.5	3.6	2.6	1.6	2.1	4.9	13.0	1.9
5 +	0.4	0.8	0.7	0.5	0.8	1.0	2.7	2.8	1.7	0.8	0.8	4.2	17.8	1.1
1999: 1	16.5	18.7	17.8	17.9	17.7	18.8	20.7	18.8	19.8	18.1	19.5	22.2	33.5	18.5
2	13.0	14.9	14.0	13.8	14.0	15.7	15.4	16.5	16.4	14.1	15.2	17.5	22.4	15.0
3	3.4	6.5	4.9	5.0	4.7	6.1	7.9	8.4	7.2	5.1	5.7	8.6	21.8	5.8
4	1.0	1.9	1.6	1.3	1.4	1.8	3.2	3.5	2.6	1.5	1.6	5.2	13.0	1.8
5 +	0.4	0.9	0.7	0.5	0.8	1.0	2.8	2.7	1.7	0.8	0.9	3.9	17.7	1.1
By Age Group														
1997: 15-19	22.6	29.0	23.7	25.4	15.5	17.1	36.2	37.3	25.8	17.4	31.4	55.2	136.4	20.0
20-24	59.2	76.1	68.6	76.0	67.0	53.7	85.4	94.7	75.3	59.5	90.5	117.5	214.6	64.0
25-29	90.6	111.9	98.0	101.2	111.7	98.8	115.8	123.4	112.5	94.3	115.1	103.2	165.5	103.8
30-34	61.5	75.7	71.4	64.6	79.6	91.5	87.2	79.4	84.9	83.2	82.8	79.6	98.1	84.5
35-39	17.3	27.3	24.4	17.1	26.6	38.1	33.2	27.0	32.4	35.7	37.2	41.3	48.7	32.5
40-44	2.2	6.1	3.1	2.4	3.9	6.3	4.7	4.0	5.6	6.0	7.7	7.6	8.6	5.2
45-49	0.2	0.0	0.2	0.0	0.1	0.2	0.3	0.4	0.1	0.3	0.0	0.0	0.0	0.2
1998: 15-19	20.4	29.7	23.9	26.4	14.9	17.2	38.7	38.0	25.4	16.1	28.7	54.8	137.9	19.8
20-24	57.8	72.5	65.8	71.7	63.7	54.6	85.3	94.0	76.1	58.2	88.6	109.8	187.8	63.2
25-29	83.2	99.6	94.2	103.9	108.3	97.4	115.6	121.2	110.5	91.0	86.0	97.3	126.8	101.5
30-34	61.7	75.1	71.1	65.1	77.2	91.9	85.8	79.1	90.7	82.4	72.0	90.4	92.0	84.6
35-39	17.1	29.9	24.3	20.5	26.3	38.6	32.9	26.4	32.8	35.5	38.3	36.0	41.6	32.8
40-44	2.3	4.3	3.6	2.2	4.1	6.4	4.3	4.0	5.3	5.9	7.2	3.8	10.3	5.2
45-49	0.1	0.2	0.1	0.2	0.1	0.3	0.2	0.3	0.2	0.2	0.0	1.6	0.0	0.2
1999: 15-19	20.1	22.4	21.9	23.5	14.6	15.9	35.6	36.8	24.5	15.4	28.1	56.7	135.5	18.7
20-24	56.5	73.7	64.7	71.8	60.6	52.5	86.1	89.8	75.4	53.8	75.2	97.6	202.7	60.9
25-29	88.3	103.7	94.7	99.7	105.8	96.4	112.7	122.3	108.9	87.8	87.4	106.0	162.5	100.0
30-34	65.3	80.8	73.4	66.5	77.0	93.6	88.6	81.0	91.1	83.9	77.0	77.5	87.2	85.8
35-39	19.8	30.7	26.5	19.8	27.3	39.0	33.1	27.7	34.8	35.9	39.7	36.6	41.9	33.6
40-44	2.7	4.1	3.7	2.2	4.1	6.8	5.4	4.3	5.8	6.3	9.4	8.8	18.7	5.5
45-49	0.1	0.0	0.2	0.0	0.1	0.3	0.1	0.1	0.3	0.2	0.8	1.7	1.7	0.2

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Demographic Estimates Section.

Table A8. Age-specific Fertility and Total Fertility Rates by Birth Order and Age of Mother for Quebec and Rest of Canada<sup>1</sup>, 1986, 1989-1999

Birth Order	Year	15-19		20-24		25-29		30-34		35-39		40-44		45-49		Total Fertility Rate		
		Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Canada
1	1986	13.01	21.16	47.20	46.09	49.85	48.42	17.49	20.57	4.42	5.03	0.50	0.66	0.03	0.02	0.66	0.71	0.70
	1989	14.86	22.29	51.09	45.59	57.95	50.49	21.45	23.55	5.19	6.29	0.64	0.85	0.05	0.02	0.76	0.75	0.75
	1990	15.66	22.94	53.49	45.75	60.65	52.95	23.54	25.20	5.64	6.87	0.66	0.89	0.02	0.02	0.80	0.77	0.78
	1991	14.93	23.67	52.62	44.41	61.47	51.22	24.25	24.97	6.20	6.99	0.73	0.93	0.01	0.04	0.80	0.76	0.77
	1992	15.08	22.89	49.24	42.46	60.41	51.41	24.80	26.05	6.10	7.31	0.78	0.99	0.02	0.01	0.78	0.76	0.76
	1993	14.69	22.31	47.70	41.73	56.78	50.70	24.75	27.02	6.29	7.70	0.86	1.11	0.01	0.04	0.76	0.75	0.75
	1994	14.89	22.30	46.99	40.74	54.50	50.84	24.57	27.99	6.55	7.94	0.89	1.19	0.02	0.04	0.74	0.76	0.75
	1995	14.29	21.92	45.30	40.07	53.94	49.35	25.42	28.95	6.52	8.37	1.00	1.23	0.04	0.05	0.73	0.75	0.74
	1996	13.89	19.72	44.88	37.41	54.54	48.17	25.23	28.70	6.93	8.86	0.87	1.33	0.04	0.05	0.73	0.72	0.72
	1997	13.15	17.50	41.36	34.93	52.00	46.22	25.15	28.22	6.98	8.84	0.99	1.38	0.03	0.04	0.70	0.69	0.69
	1998	12.48	17.56	39.27	35.45	51.28	44.81	24.92	28.71	7.07	9.03	1.04	1.36	0.03	0.05	0.68	0.68	0.68
2	1999	12.39	16.68	38.51	34.28	50.94	45.42	25.59	30.15	7.49	9.51	1.05	1.49	0.04	0.06	0.68	0.69	0.69
	1986	1.66	3.88	18.89	27.32	46.14	47.64	25.15	30.68	5.71	8.16	0.67	0.81	0.04	0.01	0.49	0.59	0.57
	1989	1.93	4.08	20.75	25.33	45.51	45.00	28.66	32.44	7.05	9.63	0.73	1.10	0.01	0.03	0.52	0.59	0.57
	1990	2.21	4.16	21.96	24.99	49.14	44.74	31.51	33.89	7.97	10.15	0.91	1.20	0.04	0.02	0.57	0.60	0.59
	1991	2.10	4.32	22.29	24.48	48.52	43.82	32.14	33.28	7.80	10.40	0.88	1.20	0.02	0.04	0.57	0.59	0.58
	1992	2.36	4.59	22.23	24.30	49.69	43.77	33.40	34.89	8.69	10.76	0.94	1.41	0.01	0.04	0.59	0.60	0.60
	1993	2.31	4.52	22.42	23.33	48.47	42.35	33.95	34.19	8.77	11.23	1.11	1.43	0.02	0.04	0.59	0.59	0.59
	1994	2.28	4.46	22.00	22.90	48.59	41.70	34.86	34.92	9.22	11.67	1.07	1.53	0.02	0.04	0.59	0.59	0.59
	1995	2.36	4.20	21.30	22.54	45.56	40.07	34.77	35.81	9.64	11.96	1.19	1.59	0.01	0.05	0.57	0.58	0.58
	1996	2.12	3.65	20.93	21.25	44.22	38.35	34.19	35.82	10.41	12.71	1.26	1.70	0.01	0.05	0.57	0.57	0.57
	1997	2.09	3.44	19.59	20.05	41.85	36.83	33.53	35.09	10.04	12.97	1.17	1.83	0.03	0.07	0.54	0.55	0.55
3	1998	2.23	3.33	19.24	19.86	41.04	36.14	33.24	35.41	10.11	13.36	1.29	1.84	0.03	0.07	0.54	0.55	0.55
	1999	2.06	2.91	17.18	19.21	39.54	34.76	33.28	35.86	10.63	13.61	1.34	2.01	0.02	0.07	0.52	0.54	0.54
	1986	0.18	0.48	3.39	7.49	13.12	19.28	12.26	17.67	4.30	6.05	0.57	0.74	0.01	0.03	0.17	0.26	0.23
	1989	0.22	0.49	4.30	7.28	13.91	17.81	13.86	18.44	4.61	7.09	0.65	0.96	0.01	0.02	0.19	0.26	0.24
	1990	0.17	0.50	4.53	7.19	15.09	17.30	15.14	18.36	5.20	7.25	0.58	0.91	0.03	0.02	0.20	0.26	0.24
	1991	0.19	0.51	4.64	7.11	15.13	16.91	15.73	18.54	5.44	7.19	0.68	0.92	0.01	0.03	0.21	0.26	0.24
	1992	0.24	0.60	5.01	7.09	15.49	16.46	16.64	17.98	5.63	7.31	0.81	0.94	0.02	0.03	0.22	0.25	0.24
	1993	0.25	0.56	5.36	7.00	15.03	15.50	16.07	17.68	5.58	7.16	0.73	0.97	0.01	0.04	0.22	0.24	0.24
	1994	0.29	0.57	5.30	7.07	15.57	15.10	16.17	16.96	5.85	7.31	0.82	1.06	0.01	0.02	0.22	0.24	0.24
	1995	0.33	0.54	5.31	6.69	14.93	14.53	16.06	16.66	5.97	7.41	0.80	1.09	0.03	0.04	0.22	0.23	0.23
	1996	0.24	0.54	5.14	6.46	14.58	13.75	15.82	16.20	6.04	7.47	0.84	1.10	0.04	0.04	0.21	0.23	0.22
	1997	0.17	0.44	4.77	6.12	13.33	12.75	14.82	15.39	5.77	7.38	0.74	1.12	0.02	0.04	0.20	0.22	0.21
	1998	0.18	0.41	4.16	5.85	11.68	12.92	13.04	15.15	5.60	7.40	0.83	1.11	0.03	0.04	0.18	0.21	0.21
	1999	0.14	0.37	3.99	5.71	11.12	12.57	12.74	15.06	5.57	7.45	0.72	1.22	0.02	0.04	0.17	0.21	0.20

Birth Order	Year	15-19		20-24		25-29		30-34		35-39		40-44		45-49		Total Fertility Rate		
		Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Quebec	Rest of Canada	Canada
4	1986	0.02	0.03	0.48	1.49	2.40	5.19	3.33	5.97	1.70	2.83	0.37	0.49	0.02	0.02	0.04	0.08	0.07
	1989	0.01	0.05	0.58	1.59	2.61	4.90	3.65	6.14	1.68	3.07	0.35	0.57	0.00	0.03	0.04	0.08	0.07
	1990	0.00	0.04	0.76	1.67	2.80	4.77	3.95	6.03	2.24	3.11	0.35	0.54	0.02	0.02	0.05	0.08	0.07
	1991	0.01	0.05	0.82	1.68	3.23	4.73	4.18	6.04	2.11	3.21	0.37	0.49	0.00	0.03	0.05	0.08	0.07
	1992	0.03	0.06	0.92	1.71	3.15	4.61	4.37	5.89	2.20	3.03	0.42	0.53	0.01	0.01	0.06	0.08	0.07
	1993	0.02	0.05	0.83	1.61	3.11	4.41	4.54	5.74	2.24	3.17	0.45	0.56	0.02	0.02	0.06	0.08	0.07
	1994	0.02	0.06	1.14	1.64	3.51	4.40	4.81	5.58	2.52	3.05	0.49	0.57	0.00	0.02	0.06	0.08	0.07
	1995	0.03	0.06	1.06	1.64	3.56	4.43	4.65	5.30	2.38	3.18	0.48	0.56	0.02	0.02	0.06	0.08	0.07
	1996	0.02	0.07	0.97	1.64	3.86	4.03	4.52	5.18	2.45	3.08	0.40	0.64	0.03	0.02	0.06	0.07	0.07
	1997	0.04	0.04	1.02	1.55	3.23	3.89	4.26	4.71	2.37	3.00	0.50	0.59	0.02	0.03	0.06	0.07	0.07
	1998	0.00	0.04	0.72	1.49	3.19	3.84	4.08	4.78	2.13	2.87	0.46	0.60	0.01	0.03	0.05	0.07	0.06
	1999	0.00	0.04	0.75	1.41	3.00	3.78	3.66	4.63	2.03	2.93	0.43	0.62	0.02	0.03	0.05	0.07	0.06
5 +	1986	0.00	0.00	0.09	0.37	0.68	1.82	1.29	2.86	1.07	2.14	0.36	0.72	0.02	0.06	0.02	0.04	0.03
	1989	0.00	0.00	0.13	0.41	0.77	1.77	1.60	2.88	1.30	2.15	0.35	0.63	0.00	0.04	0.02	0.04	0.03
	1990	0.01	0.01	0.15	0.44	0.77	1.91	1.51	2.92	1.30	2.27	0.39	0.67	0.03	0.05	0.02	0.04	0.04
	1991	0.00	0.00	0.14	0.42	0.80	1.93	1.62	2.98	1.38	2.25	0.37	0.64	0.04	0.05	0.02	0.04	0.04
	1992	0.00	0.01	0.21	0.42	0.97	1.99	1.69	2.98	1.32	2.29	0.38	0.68	0.01	0.04	0.02	0.04	0.04
	1993	0.00	0.01	0.17	0.45	0.95	1.96	1.80	2.93	1.48	2.22	0.47	0.65	0.01	0.05	0.02	0.04	0.04
	1994	0.00	0.01	0.19	0.49	1.16	2.01	1.81	2.93	1.39	2.21	0.46	0.67	0.01	0.03	0.03	0.04	0.04
	1995	0.00	0.00	0.20	0.47	1.08	2.04	1.91	2.83	1.63	2.33	0.47	0.70	0.03	0.05	0.03	0.04	0.04
	1996	0.00	0.00	0.21	0.48	1.23	1.98	1.94	2.75	1.50	2.22	0.57	0.71	0.05	0.05	0.03	0.04	0.04
	1997	0.00	0.00	0.21	0.42	1.30	1.84	1.85	2.66	1.43	2.30	0.48	0.71	0.02	0.05	0.03	0.04	0.04
	1998	0.00	0.00	0.26	0.43	1.15	1.87	1.90	2.77	1.38	2.17	0.51	0.69	0.03	0.06	0.03	0.04	0.04
	1999	0.00	0.00	0.21	0.41	1.16	1.85	1.73	2.75	1.55	2.13	0.51	0.69	0.05	0.05	0.03	0.04	0.04
All Orders	1986	14.86	25.56	70.05	82.75	112.18	122.34	59.52	77.75	17.20	24.22	2.48	3.43	0.12	0.14	1.38	1.68	1.60
	1989	17.03	26.91	76.85	80.20	120.75	119.96	69.22	83.46	19.82	28.23	2.72	4.11	0.08	0.15	1.53	1.72	1.67
	1990	18.06	27.66	80.88	80.04	128.43	121.68	75.65	86.40	22.35	29.65	2.89	4.21	0.15	0.12	1.64	1.75	1.72
	1991	17.22	28.56	80.52	78.09	129.16	118.61	77.91	85.82	22.93	30.05	3.03	4.19	0.09	0.20	1.65	1.73	1.71
	1992	17.72	28.14	77.60	75.98	129.71	118.23	80.89	87.79	23.94	30.69	3.33	4.55	0.08	0.13	1.67	1.73	1.71
	1993	17.26	27.45	76.48	74.12	124.34	114.92	81.11	87.55	24.36	31.49	3.63	4.72	0.07	0.18	1.64	1.70	1.68
	1994	17.46	27.40	75.61	72.85	123.34	114.05	82.21	88.39	25.52	32.18	3.74	5.02	0.06	0.16	1.64	1.70	1.68
	1995	17.01	26.73	73.17	71.41	119.06	110.42	82.81	89.56	26.13	33.26	3.94	5.17	0.13	0.21	1.61	1.68	1.66
	1996	16.27	23.99	72.13	67.24	118.42	106.28	81.69	88.64	27.33	34.34	3.94	5.47	0.17	0.20	1.60	1.63	1.62
	1997	15.45	21.42	66.95	63.08	111.72	101.53	79.61	86.08	26.58	34.50	3.88	5.63	0.11	0.22	1.52	1.56	1.55
	1998	14.89	21.34	63.66	63.07	108.33	99.57	77.19	86.83	26.29	34.83	4.13	5.60	0.12	0.25	1.47	1.56	1.54
	1999	14.60	20.00	60.64	61.02	105.77	98.37	76.99	88.45	27.27	35.63	4.06	6.02	0.15	0.25	1.45	1.55	1.52

<sup>1</sup> Excluding Newfoundland and Labrador before 1991.

Sources: Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Population Estimates Section.



**Table A9. Number of Total Deaths and Infant Deaths (age less than one year), Canada, Provinces and Territories, 1981, 1986, 1989-1999**

Year	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T. <sup>1</sup>	Nvt.	Canada
Number of Deaths														
1981	3,230	992	6,958	5,139	42,684	62,838	8,648	7,523	12,823	19,857	141	196	...	171,029
1986	3,540	1,121	7,255	5,458	46,892	67,865	8,911	8,061	13,560	21,213	113	119	116	184,224
1989	3,718	1,089	7,516	5,496	48,305	70,907	8,819	7,920	13,854	22,997	95	140	109	190,965
1990	3,884	1,143	7,388	5,426	48,420	70,818	8,863	8,044	14,068	23,577	115	124	103	191,973
1991	3,798	1,188	7,255	5,469	49,121	72,917	8,943	8,098	14,451	23,977	114	135	102	195,568
1992	3,798	1,114	7,544	5,609	48,824	73,206	8,980	7,793	14,679	24,615	117	144	112	196,535
1993	3,890	1,145	7,559	5,806	51,711	75,853	9,299	8,164	15,338	25,764	123	143	117	204,912
1994	4,050	1,114	7,770	5,917	51,365	77,487	9,148	8,308	15,613	25,939	124	143	98	207,076
1995	3,935	1,153	7,687	5,938	52,734	78,479	9,658	8,495	15,895	26,375	157	131	96	210,733
1996	3,928	1,268	7,751	5,896	52,336	79,099	9,497	8,765	16,391	27,536	120	152	120	212,859
1997	4,318	1,030	8,044	5,944	54,399	79,541	9,511	8,637	16,452	27,412	123	138	120	215,669
1998	4,230	1,207	8,068	6,305	54,181	80,184	9,815	8,905	16,795	27,978	135	146	142	218,091
1999	4,139	1,137	7,640	6,074	54,555	81,393	9,860	9,044	17,206	28,018	135	197	89	219,487
Infant Deaths (age less than 1 year)														
1981	98	25	139	114	807	1,073	191	203	452	424	8	28	...	3,562
1986	65	13	104	81	604	969	157	157	393	355	12	10	18	2,938
1989	64	12	73	69	632	985	115	134	325	360	2	7	17	2,795
1990	70	12	81	71	612	946	138	123	346	344	4	3	16	2,766
1991	56	13	69	58	578	953	111	126	285	298	6	7	13	2,573
1992	49	3	71	59	522	886	113	110	304	286	2	9	17	2,431
1993	50	16	82	65	529	922	118	115	268	264	4	5	10	2,448
1994	52	11	67	48	506	878	115	125	294	297	1	10	13	2,417
1995	46	8	52	41	477	870	123	123	274	280	6	8	13	2,321
1996	38	8	59	40	396	802	104	112	236	237	0	4	15	2,051
1997	28	7	44	45	444	728	110	114	178	210	4	5	11	1,928
1998	31	12	44	51	425	667	97	91	183	183	2	12	13	1,811
1999	25	10	38	38	361	704	120	79	220	160	1	11	8	1,775

<sup>1</sup> Nunavut included in 1981.

**Source:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section.

**Table A10. Life Expectancy at Different Ages, Canada, 1971 to 1999**

Age	1971	1976	1981	1986	1991	1996	1997	1998	1999 <sup>1</sup>
Males									
0	69.58	70.47	72.03	73.29	74.61	75.45	75.76	76.02	76.27
1	70.00	70.49	71.82	72.92	74.14	74.92	75.21	75.46	75.70
5	66.25	66.71	67.99	69.05	70.25	71.01	71.30	71.55	71.78
10	61.43	61.86	63.10	64.14	65.32	66.07	66.35	66.60	66.84
15	56.58	56.99	58.22	59.23	60.40	61.14	61.42	61.67	61.90
20	51.97	52.39	53.57	54.52	55.66	56.36	56.64	56.88	57.11
25	47.40	47.83	48.95	49.85	50.96	51.63	51.90	52.14	52.36
30	42.72	43.15	44.26	45.12	46.24	46.88	47.13	47.36	47.59
35	38.04	38.46	39.53	40.40	41.53	42.16	42.39	42.61	42.83
40	33.42	33.83	34.85	35.69	36.86	37.47	37.68	37.88	38.10
45	28.96	29.34	30.28	31.07	32.22	32.84	33.04	33.23	33.44
50	24.71	25.08	25.92	26.62	27.73	28.31	28.49	28.68	28.89
55	20.75	21.10	21.83	22.42	23.43	23.96	24.11	24.28	24.47
60	17.11	17.45	18.06	18.54	19.44	19.86	19.99	20.14	20.31
65	13.87	14.17	14.65	15.01	15.81	16.09	16.19	16.31	16.46
70	11.05	11.26	11.66	11.90	12.55	12.73	12.80	12.89	13.02
75	8.62	8.78	9.07	9.22	9.71	9.79	9.84	9.88	10.01
80	6.59	6.72	6.92	6.99	7.36	7.31	7.32	7.34	7.44
85	5.04	5.17	5.22	5.20	5.53	5.36	5.35	5.36	5.47
90	3.92	4.30	3.95	3.82	4.28	3.94	3.93	3.96	4.04
Females									
0	76.58	77.79	79.16	79.99	80.96	81.20	81.33	81.49	81.70
1	76.77	77.71	78.83	79.54	80.43	80.62	80.73	80.89	81.10
5	73.00	73.89	74.97	75.66	76.52	76.70	76.81	76.97	77.17
10	68.13	69.00	70.06	70.72	71.58	71.76	71.86	72.01	72.22
15	63.23	64.09	65.13	65.79	66.64	66.81	66.91	67.06	67.26
20	58.40	59.25	60.27	60.91	61.75	61.92	62.02	62.17	62.37
25	53.55	54.40	55.40	56.02	56.86	57.01	57.11	57.26	57.46
30	48.71	49.54	50.54	51.14	51.97	52.12	52.21	52.36	52.56
35	43.91	44.71	45.69	46.27	47.11	47.25	47.33	47.47	47.67
40	39.19	39.96	40.90	41.45	42.29	42.41	42.50	42.64	42.84
45	34.56	35.30	36.21	36.72	37.52	37.66	37.74	37.88	38.08
50	30.06	30.80	31.64	32.12	32.89	32.99	33.07	33.20	33.39
55	25.72	26.43	27.24	27.67	28.39	28.46	28.52	28.65	28.84
60	21.58	22.25	23.02	23.40	24.07	24.11	24.16	24.27	24.44
65	17.66	18.30	19.02	19.35	19.97	19.96	20.01	20.10	20.25
70	14.04	14.64	15.31	15.57	16.13	16.08	16.10	16.18	16.34
75	10.81	11.36	11.95	12.13	12.60	12.51	12.52	12.57	12.73
80	8.07	8.54	9.01	9.15	9.52	9.36	9.35	9.38	9.51
85	5.93	6.36	6.66	6.68	6.98	6.77	6.73	6.74	6.86
90	4.45	4.95	4.95	4.86	5.07	4.82	4.74	4.73	4.83

<sup>1</sup> Calculated by using the average of deaths in 1998 and twice those of 1999.

**Sources:** Statistics Canada, Health Statistics Division, Health Status and Vital Statistics Section and Demography Division, Population Estimates Section and Research and Analysis Section.

Table A11. Landed Immigrants in Canada by Country of Birth, 1981, 1986, 1991-2000

	1981	1986	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Asia</b>	<b>50,894</b>	<b>42,294</b>	<b>123,422</b>	<b>143,061</b>	<b>149,835</b>	<b>143,254</b>	<b>130,542</b>	<b>145,492</b>	<b>139,749</b>	<b>102,779</b>	<b>113,397</b>	<b>140,526</b>
Afghanistan	48	584	1,395	1,223	972	849	1,483	2,001	2,307	2,082	2,268	3,160
Bangladesh	98	473	1,105	1,621	1,268	1,341	1,970	2,754	3,272	2,116	2,010	3,040
China <sup>1</sup>	13,829	8,477	37,567	50,668	47,044	57,078	45,846	49,131	42,559	29,172	33,882	40,945
South Korea	1,504	1,203	2,608	3,787	3,816	3,015	3,506	3,250	4,107	4,955	7,210	7,608
India	9,427	7,450	14,300	14,302	21,751	18,569	18,265	23,384	21,716	16,989	18,840	28,183
Iran	1,409	2,128	6,688	7,103	4,171	3,010	4,078	6,255	7,891	7,008	6,201	5,915
Iraq	305	316	996	2,174	3,320	2,253	2,414	2,769	2,568	1,898	2,037	2,303
Lebanon	1,043	2,419	12,225	6,664	4,804	2,724	2,167	1,895	1,469	1,356	1,567	1,897
Pakistan	823	632	2,788	3,750	4,511	4,401	4,667	8,560	12,176	8,440	9,587	14,865
Philippines	5,986	4,200	12,730	13,804	20,548	19,493	15,819	13,626	11,411	8,637	9,536	10,636
Sri Lanka	368	1,827	7,158	12,942	9,480	7,085	9,360	6,442	5,345	3,541	4,936	6,065
Taiwan	705	638	4,295	7,077	9,379	7,005	7,415	12,739	12,783	6,995	5,326	3,409
Vietnam	8,241	6,221	8,892	7,864	8,392	6,507	4,176	2,711	2,011	1,833	1,622	1,950
Others	7,108	5,726	10,675	10,082	10,379	9,924	9,376	9,975	10,134	7,757	8,375	10,550
<b>Europe</b>	<b>44,817</b>	<b>22,447</b>	<b>46,890</b>	<b>43,627</b>	<b>45,701</b>	<b>38,068</b>	<b>40,302</b>	<b>39,195</b>	<b>37,947</b>	<b>37,546</b>	<b>38,776</b>	<b>42,537</b>
Germany	2,075	1,342	1,574	1,411	1,659	1,364	1,589	1,761	1,561	1,664	1,911	1,649
Bosnia-Herzegovina	0	0	0	344	2,741	4,718	4,183	2,471	2,204	2,544	2,455	813
France	1,681	1,113	2,631	3,114	3,350	2,521	3,037	2,437	2,308	3,022	3,181	3,560
Great Britain	18,920	4,605	6,443	5,919	5,954	4,770	4,567	4,381	3,923	3,284	3,777	3,777
Greece	927	549	626	597	539	341	246	238	210	145	158	170
Ireland	851	477	639	490	418	317	226	260	226	173	167	166
Italy	2,058	781	782	671	696	533	505	486	465	369	389	356
Poland	4,094	5,271	15,801	11,940	6,944	3,572	2,452	2,167	1,792	1,521	1,370	1,398
Portugal	1,838	1,973	5,188	2,648	1,622	773	781	672	677	406	329	377
Romania	1,004	998	2,599	3,314	3,786	3,595	4,342	3,952	4,048	3,112	3,583	4,588
Russia	0	1	7	174	905	1,429	2,105	3,175	4,240	4,792	4,397	4,864
Ukraine	0	0	10	123	872	1,441	1,833	2,672	2,643	2,768	2,827	3,565
Others	11,369	5,337	10,590	12,882	16,215	12,694	14,436	14,523	13,650	13,746	14,232	17,254



	1981	1986	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Africa</b>	<b>5,915</b>	<b>5,173</b>	<b>16,634</b>	<b>20,239</b>	<b>17,564</b>	<b>14,215</b>	<b>15,496</b>	<b>15,846</b>	<b>15,308</b>	<b>14,517</b>	<b>16,426</b>	<b>20,693</b>
South Africa	1,238	795	948	1,139	1,668	2,464	1,475	1,350	1,763	1,416	1,433	1,717
Algeria	128	111	913	852	751	649	1,113	2,042	1,795	2,256	2,368	2,853
Egypt	767	630	1,941	1,640	1,660	2,320	2,718	2,374	2,043	1,307	1,247	1,376
Ethiopia	152	991	2,569	2,275	1,924	1,271	950	1,041	812	654	746	1,165
Somalia	9	58	3,268	5,554	3,660	1,730	2,078	1,428	1,158	1,387	1,598	1,472
Others	3,621	2,588	6,995	8,779	7,901	5,781	7,162	7,611	7,737	7,497	9,034	12,110
<b>North and Central America</b>	<b>10,184</b>	<b>12,381</b>	<b>19,096</b>	<b>18,835</b>	<b>14,427</b>	<b>8,772</b>	<b>7,268</b>	<b>8,552</b>	<b>7,928</b>	<b>6,879</b>	<b>7,830</b>	<b>8,263</b>
United States	8,696	6,090	5,323	5,975	6,482	5,154	4,329	5,054	4,405	4,166	4,913	5,139
Mexico	397	673	1,150	1,200	1,153	786	764	1,247	1,689	1,383	1,683	1,657
Others	1,091	5,618	12,623	11,660	6,792	2,832	2,175	2,251	1,834	1,330	1,234	1,467
<b>Caribbean and Bermuda</b>	<b>8,805</b>	<b>8,867</b>	<b>13,111</b>	<b>15,236</b>	<b>16,753</b>	<b>10,070</b>	<b>10,089</b>	<b>9,395</b>	<b>8,235</b>	<b>6,405</b>	<b>6,811</b>	<b>7,164</b>
Haiti	3,704	1,729	2,851	2,433	3,688	2,124	2,036	1,977	1,657	1,316	1,448	1,650
Jamaica	2,688	4,663	5,135	6,060	6,117	3,950	3,640	3,308	2,870	2,269	2,363	2,463
Trinidad and Tobago	949	921	2,981	4,347	4,216	2,342	2,584	2,205	1,760	1,197	1,186	920
Others	1,464	1,554	2,144	2,396	2,732	1,654	1,829	1,905	1,948	1,623	1,814	2,131
<b>South America</b>	<b>6,126</b>	<b>6,530</b>	<b>10,514</b>	<b>10,313</b>	<b>9,554</b>	<b>7,957</b>	<b>7,518</b>	<b>6,020</b>	<b>5,590</b>	<b>4,910</b>	<b>5,585</b>	<b>6,783</b>
Guyana	3,024	3,977	3,370	3,059	3,549	4,275	3,974	2,392	1,841	1,276	1,388	1,334
Others	3,102	2,553	7,144	7,254	6,005	3,682	3,544	3,628	3,749	3,634	4,197	5,449
<b>Australasia</b>	<b>1,024</b>	<b>451</b>	<b>743</b>	<b>931</b>	<b>1,017</b>	<b>741</b>	<b>676</b>	<b>696</b>	<b>625</b>	<b>515</b>	<b>579</b>	<b>661</b>
<b>Oceania</b>	<b>726</b>	<b>383</b>	<b>1,626</b>	<b>1,780</b>	<b>1,336</b>	<b>1,049</b>	<b>680</b>	<b>636</b>	<b>472</b>	<b>397</b>	<b>379</b>	<b>475</b>
<b>Others and not stated</b>	<b>303</b>	<b>815</b>	<b>736</b>	<b>836</b>	<b>577</b>	<b>268</b>	<b>300</b>	<b>220</b>	<b>176</b>	<b>224</b>	<b>161</b>	<b>234</b>
<b>TOTAL</b>	<b>128,794</b>	<b>99,341</b>	<b>232,772</b>	<b>254,858</b>	<b>256,764</b>	<b>224,394</b>	<b>212,871</b>	<b>226,052</b>	<b>216,030</b>	<b>174,172</b>	<b>189,944</b>	<b>227,336</b>

<sup>1</sup> Hong Kong included.

Note: Preliminary data as of December 4, 2001.

Sources: Citizenship and Immigration Canada, unpublished data.

**Table A12. Population (in thousands) as of July 1st, by Age and Sex, Canada, 1998, 1999, 2000**

Age	Males			Females		
	1998	1999	2000	1998	1999	2000
0	176.0	173.2	171.6	168.3	165.4	163.9
1	184.9	177.0	174.5	174.2	170.0	167.2
2	197.4	185.9	178.3	189.2	175.4	171.3
3	200.8	198.3	187.1	190.3	190.2	176.6
4	202.5	201.7	199.6	192.2	191.2	191.4
5	206.8	203.5	203.1	196.4	193.2	192.6
6	212.0	207.9	205.0	202.5	197.5	194.7
7	214.9	213.0	209.1	204.2	203.5	198.8
8	215.7	215.8	214.1	205.3	205.0	204.5
9	208.4	216.6	216.9	198.2	206.1	206.1
10	202.7	209.4	218.0	193.1	199.1	207.2
11	204.7	203.6	210.5	194.9	193.8	200.1
12	209.0	205.7	204.8	197.6	195.8	194.9
13	210.7	210.1	207.0	198.4	198.5	196.8
14	209.2	211.7	211.2	198.3	199.2	199.4
15	208.7	210.3	213.0	197.6	199.3	200.3
16	208.9	210.0	211.8	198.0	199.0	200.6
17	211.8	210.3	211.6	201.4	199.7	200.8
18	212.3	213.5	212.2	200.9	202.9	201.6
19	210.3	214.2	215.9	198.6	203.1	205.6
20	207.7	211.6	216.0	196.7	200.8	205.7
21	208.7	209.2	213.2	199.6	199.0	203.5
22	209.3	210.3	210.9	200.9	201.9	201.4
23	209.3	211.2	212.4	201.9	203.0	204.1
24	203.8	211.2	213.2	197.8	204.2	205.3
25	205.9	205.6	213.1	200.3	200.2	206.5
26	209.8	207.8	207.6	205.0	202.6	202.7
27	219.4	211.8	210.1	215.1	207.4	205.2
28	222.1	221.5	214.3	216.3	217.4	210.2
29	220.3	224.4	224.1	216.0	218.7	220.1
30	221.4	222.7	226.8	217.9	218.2	221.5
31	228.2	223.3	225.2	224.0	219.8	220.7
32	242.5	229.7	225.5	237.3	225.5	222.2
33	261.0	243.7	231.1	255.3	238.7	227.3
34	271.2	262.2	245.2	264.6	256.7	240.4
35	274.9	272.4	263.6	269.5	266.0	258.2
36	270.0	276.0	273.8	265.9	270.8	267.6
37	272.4	270.6	277.2	269.8	266.7	272.2
38	269.6	272.6	271.2	267.8	270.5	267.7
39	263.7	269.9	273.2	263.8	268.4	271.4
40	262.8	264.0	270.2	261.3	264.3	269.2
41	257.6	263.0	264.1	257.3	261.7	264.8
42	250.0	257.8	263.4	250.5	257.6	262.1
43	248.3	250.1	258.1	248.9	250.6	257.9
44	239.8	248.5	250.3	242.1	248.9	250.8
45	229.7	239.8	248.6	231.8	241.9	249.0
46	222.4	229.6	239.7	222.6	231.7	241.8

**Table A12. Population (in thousands) as of July 1st, by Age and Sex, Canada, 1998, 1999, 2000 - Concluded**

Age	Males			Females		
	1998	1999	2000	1998	1999	2000
47	218.3	222.0	229.2	218.4	222.3	231.5
48	214.4	217.7	221.5	214.3	218.1	222.0
49	210.3	213.7	217.0	211.4	214.0	217.6
50	211.0	209.6	212.9	211.2	210.9	213.4
51	210.1	210.1	208.7	211.1	210.7	210.4
52	180.4	209.3	209.2	181.8	210.6	210.2
53	168.2	179.6	208.4	169.3	181.3	210.3
54	163.8	167.3	178.6	165.7	168.8	180.9
55	158.8	162.8	166.2	160.9	165.2	168.4
56	147.5	157.8	161.7	149.9	160.4	164.8
57	141.3	146.4	156.7	144.6	149.4	160.0
58	133.4	140.1	145.3	137.0	144.1	149.1
59	129.8	132.2	139.0	133.5	136.5	143.7
60	125.1	128.6	131.1	128.9	133.0	136.0
61	120.3	123.8	127.3	124.6	128.3	132.5
62	120.0	119.0	122.6	124.6	123.9	127.7
63	116.4	118.5	117.5	121.8	123.9	123.2
64	113.6	114.8	116.9	118.7	120.9	123.1
65	114.5	111.7	112.9	121.0	117.7	119.9
66	114.1	112.2	109.5	120.8	119.9	116.6
67	111.4	111.8	109.9	121.0	119.5	118.5
68	107.0	108.9	109.2	118.2	119.5	117.9
69	100.5	104.3	106.1	113.8	116.6	117.8
70	97.5	97.7	101.4	112.9	112.1	114.8
71	92.1	94.6	94.7	110.0	111.0	110.2
72	88.4	89.0	91.5	109.8	107.9	108.9
73	83.7	85.2	85.7	107.3	107.7	105.8
74	78.7	80.4	81.8	104.0	104.8	105.3
75	73.5	75.3	77.0	99.7	101.4	102.3
76	69.7	69.9	71.6	97.5	96.8	98.6
77	63.8	66.0	66.2	91.5	94.5	93.9
78	57.1	59.9	62.1	84.5	88.3	91.4
79	47.1	53.8	56.5	72.7	81.6	85.4
80	42.0	43.8	50.5	66.1	69.6	78.5
81	38.3	38.6	40.3	62.9	63.0	66.5
82	34.7	34.8	35.2	59.0	59.5	59.5
83	32.4	31.2	31.2	56.8	55.2	55.6
84	28.0	29.1	27.8	51.1	52.9	51.3
85	23.6	24.8	25.9	45.2	47.3	49.1
86	19.2	20.8	22.0	39.1	41.4	43.5
87	15.6	16.5	18.2	34.1	35.4	37.8
88	12.9	13.3	14.2	28.9	30.5	31.8
89	10.2	10.9	11.2	24.4	25.5	27.1
90 +	30.9	32.5	34.6	89.9	93.8	98.7
Total	14,978.9	15,101.9	15,234.3	15,269.3	15,397.3	15,535.3

**Source:** Statistics Canada, Demography Division, Population Estimates Section.



## GLOSSARY\*

**Age:** Age at last birthday (in years).

**Aging (of a Population):** An increase of the percentage of old persons in the total population.

**Birth Cohort or Generation:** Unless otherwise specified, refers here to a group of persons born within the 12-month period between January 1<sup>st</sup> and December 31<sup>st</sup> of a given year.

### Census Coverage

**Net undercoverage:** Difference between undercoverage and overcoverage.

**Overcoverage:** Number of persons who should not have been counted in the census or who were counted more than once.

**Undercoverage:** Number of persons not enumerated in a census (who were intended to have been enumerated).

**Census Metropolitan Area (CMA):** The general concept of a census metropolitan area (CMA) is one of a very large *urban area*, together with adjacent *urban* and *rural areas* which have a high degree of economic and social integration with that urban area.

A Census Metropolitan Area is delineated around an urban area (called the *urbanized core* and having a population of at least **100,000 (based on the previous census)**). Once an area becomes a CMA, it is retained in the program even if its population subsequently declines.

CMAs are comprised of one or more *census subdivisions (CSDs)* which meet at least one of the following criteria:

- (1) the CSD falls completely or partly inside the urbanized core;
- (2) at least 50% of the employed labour force *living* in the CSD *works* in the urbanized core; or
- (3) at least 25% of the employed labour force *working* in the CSD *lives* in the urbanized core (**1991 Census Dictionary**, Catalogue no. 92-351-XPE, page 181).

**Cohort:** Represents a group of persons who have experienced a specific demographic event during a given period which can be a year. Thus, the married cohort of 1996 consists of the number of persons who married in 1996. Persons born within a specified year could be referred to as a generation.

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\* For further information consult the following: International Union for the Scientific Study of Population (1980). **Multilingual Demographic Dictionary**, Ordina Editions, Liège and Van de Walle, Étienne. **The Dictionary of Demography**, ed. Christopher Wilson. Oxford, England, New York, New York, United States of America.

**Cohort, fictitious:** An artificial cohort created from portions of actual cohorts present at different successive ages in the same year.

**Common-law Union:** Union consisting of a male and a female living together as husband and wife, without being legally married.

**Components of Demographic Change:** Any of the classes of events generating population movement or variations. Births, deaths, migration, marriages, divorces and new widowhoods are the components responsible for the change in total population or in the age, sex and marital status distribution of the population.

**Current index:** An index constructed from measurements of demographic phenomena and based on the events reflecting those phenomena during a given period, usually a year. For example, life expectancy in 1996 is a current index in the sense that it indicates the average number of years a person would live if he or she experienced 1996 conditions throughout his or her life.

**Dependency Ratio:** The total population is customarily divided up into three broad age groups: 0-14 (children), 15-64 (adults) and 65 and over (older persons). The following ratios may be defined on the basis of this classification:

- (a) child dependency ratio: The number of children per adult (15-64);
- (b) age dependency ratio: The number of aged persons per adult (15-64);
- (c) total dependency ratio: The sum of the child and the aged dependency ratios.

**Error of Closure:** Difference between the postcensal estimate and the population adjusted for net undercoverage according to a census for the same date.

**Fertility:** Relates the number of live births to the number of women, couples or, very rarely, men.

**Infant mortality:** Mortality of children less than a year old.

**Intensity:** Frequency of occurrence of an event among members of a given cohort.

**Intercensal:** The period between two censuses.

**International Migration:** Movement of population between Canada and a foreign country which involves a change in residence. A distinction is made between *landed immigrants*, *returning Canadians* from other countries who settle in Canada, *emigrants* and the net change in *non-permanent residents*.

**Interprovincial Migration:** Movement from one province to another involving a permanent change in residence. A person who takes up residence in another province is an *out-migrant* with reference to the province of origin, and an *in-migrant* with reference to the province of destination.

**Life expectancy:** A statistical measure derived from the life table that indicates the average years of life remaining for a person at a specified age, if the current age-specific mortality rates prevail for the remainder of that person's life.

**Legal Marital Status:** Indicates the conjugal status, that is whether single, married, widowed or divorced.

*Single:* Includes persons who have never been married and all persons under 15 years of age.

*Married:* Includes persons legally married and persons legally married and separated.

*Widowed:* A person whose spouse has died and who has not remarried.

*Divorce:* A person who has obtained a legal divorce and who has not remarried.

**Mean Age:** The mean age of a population is the average age of all its members.

**Median Age:** The median age is an age “x”, such that exactly one half of the population is older than “x” and the other half is younger than “x”.

**Natural Increase:** A change in population size over a given period as a result of the difference between the numbers of births and deaths.

**Neonatal mortality:** Mortality in the first month after birth (part of infant mortality).

**Net migration:** Difference between immigration and emigration for a given area and period of time.

**Non-permanent Residents:** The five following groups are referred to as non-permanent residents:

- persons residing in Canada claiming refugee status;
- persons residing in Canada who hold a student authorization (foreign students, student visa holders);
- persons residing in Canada who hold an employment authorization (foreign workers, work permit holders);
- persons residing in Canada who hold a Minister’s permit;
- all non-Canadian born dependents of persons claiming refugee status, or of persons holding student authorizations, employment authorizations or Minister’s permits and living in Canada.

**Parity:** A term used in reference to a woman or a marriage to denote the number of births or deliveries by the woman or in the marriage. A two-parity woman is a woman who has given birth to a second-order child.

**Population:** Estimated population and population according to the census are both defined as being the number of Canadians whose usual place of residence is in that area, regardless of where they happened to be on Census Day. Also included are any Canadians staying in a dwelling in that area on Census Day and having no usual place of residence elsewhere in Canada, as well as those considered “non-permanent residents”.



**Population Estimate:**

***Preliminary, Updated and Final Postcensal:*** Population estimates produced by using data from the most recent census adjusted for net census undercoverage and estimates of the components of demographic change since that last census.

***Intercensal:*** Population estimate derived by using postcensal estimates and data from the most recent census counts adjusted for net undercount preceding and following the year in question.

**Population Growth:** A change, either positive or negative, in population size over a given period.

**Population movement:** Gradual change in population status over a given period attributable to the demographic events that occur during the period. Movement here is not a synonym for migration.

**Population Projection:** The projection differs from the estimate in that its objective is to establish what the evolution of the population will be in the future by size, geographical distribution and other demographic characteristics using selected hypotheses. A reference is made to a projection when the formulated hypotheses appear to be highly probable. Generally, population projections are restricted to a short term period.

**Post-neonatal mortality:** Mortality between the ages of one month and one year.

**Prevalence:** Number of cases existing at one point in time.

**Probability of survival:** Probability of a survivor of exact age  $x$  surviving at least to age  $x+n$ . Its notation is  ${}_n p_x$  and it is the complement of the probability of dying ( $1 - {}_n q_x$ ).

**Proportion ever married:** A measure of the prevalence of marriage in a generation or a fictitious cohort. It is usually equivalent to the proportion remaining single at an age such as 50 after which first marriages are rare.

**Rate:**

***Age-Specific Fertility:*** Ratio of the number of births occurring in a given age group to the number of females of a given age (per 1,000).

***Birth:*** Refers to a rate calculated by relating the number of live births observed in a population during a given period to the size of the population during that period (per 1,000).

***Divorce:*** Refers to the number of divorces per 1,000 population.

***First Marriage:*** Ratio of the number of first marriages observed in a population in a given period to the number of persons in that population regardless of the marital status (per 1,000).

***Mortality:*** Ratio of the annual number of deaths occurring in a population or sub-population during a given period to the number exposed to the risk of dying during the same period (per 1,000).

***Population Growth:*** Ratio of population growth between the year  $t$  and  $t+1$ , to the average population of that period (per 1,000).

**Residual:** Difference between population growth as measured by population estimates of two consecutive years and the sum of the components. This difference results from the distribution of the closure error between years within the quinquennial period.

**Returning Canadians:** Canadian citizens and landed immigrants who emigrated from the country and who subsequently returned to Canada to re-establish a permanent residence.

**Sex Ratio:** The ratio of the number of men to the number of women. This is not to be confused with the sex ratio at birth, which is the ratio of the number of liveborn boys to the number of liveborn girls. This ratio is usually expressed as an index, with the number of females taken to be a base of 100.

**Standardized Rates:** Mathematical transformations designed to make it possible to compare different populations with respect to a variable, e.g., fertility or mortality, where the influence of another variable, e.g., age, is held constant.

**Structure:** Arrangement of a population by different demographic characteristics such as age, sex or marital status.

**Tempo:** Distribution over time, within the cohort, of the demographic events corresponding to the investigated phenomenon.

**Total Rates:** A period measure obtained by the summation of the series of age-specific or duration-specific rates. It represents the behaviour of the members of the fictitious cohort.

***Total Divorce Rate:*** Proportion of marriages that finish in divorce before the 25th anniversary according to the divorce conditions of that year. It is a result of the sum of the divorce rates by length of marriage expressed per 10,000.

***Total Fertility:*** Average number of children per female according to the fertility in a given year computed by the summation of the series of age-specific fertility rates.

***Total First Marriage:*** Proportion of males or females marrying before their 50th birthday according to nuptiality conditions in a given year computed by the summation of the rates by age at first marriage.

**Vital Statistics:** Includes all the demographic events (that is to say births, deaths, marriages and divorces) for which there exists a legal requirement to inform the Provincial or Territorial Registrar's Office.

## **PART II**

### **A COMPARATIVE STUDY OF RECENT TRENDS IN CANADIAN AND AMERICAN FERTILITY, 1980-1999**

by Alain Bélanger and Geneviève Ouellet

### **CHANGING DEMOGRAPHIC TRENDS AND THE USE OF HOME CARE SERVICES**

by Yves Carrière, Laurent Martel,  
Jacques Légaré and Lucie Morin





# A COMPARATIVE STUDY OF RECENT TRENDS IN CANADIAN AND AMERICAN FERTILITY, 1980-1999

Alain Bélanger\* and Geneviève Ouellet\*

## *Summary*

*Canadians and Americans report wanting to have the same number of children. However, Canada's total fertility rate is declining, and in 1999 it reached an all-time low of 1.52 children per woman, while the U.S. rate, which is rising, reached 2.08 children per woman. The differential between the two countries has increased over the last decade and is now about one-half child per woman. This study describes the fertility differences between the two countries and explores a few possible explanations, drawing primarily on vital statistics data from the two countries but also on data from two national fertility surveys conducted in 1995: the General Social Survey for Canada and the National Survey of Family Growth for the United States.*

*The high fertility rates of American ethno-racial groups does not entirely explain the differences observed, and the growing gaps between the two countries are due to a sizable drop in fertility among Canadian women under 30 years of age. The relatively high fertility rate of American teenage females explains nearly a third of the difference observed between the two countries. Unwanted pregnancies and births are more frequent in the United States, as is the use of abortion, while Canadian females use more effective contraceptive methods than Americans, partly because medical methods and sterilization are more accessible and less costly. Marriage takes place earlier and is more widespread in the United States, and a higher level of religious practice is indicative of a more traditional and less secularized society than in Canada. Lastly, access to the labour market is more difficult for young Canadians than for young Americans.*

## **Introduction**

In 1999, Canadian fertility reached an all-time low of 1.52 children per woman. That same year, the U.S. rate was 2.08 children per woman, approaching the replacement level. ***The gap between the two countries, amounting to approximately one-half child per woman in favour of the United States, amounts to what could be called, in practical terms, Canada's fertility deficit.***

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\* Statistics Canada, Demography Division.

And yet the two neighbouring countries are similar in many ways. Their economies have long been highly integrated, and this integration has increased since the signing of the free trade agreements (NAFTA). The economies of both countries benefit from a highly educated and skilled labour force. In both countries, female participation in the labour market is sizable. Both countries receive a large number of immigrants, and they have had comparable rates of population growth for decades, although growth was somewhat stronger in Canada throughout the twentieth century except in the last decade.

Of course, there are also major differences between the two societies. In particular, the economic, political and military power of the United States is unequalled. To judge from per capita gross domestic product, Americans are also, on average, wealthier than Canadians (\$36,000, compared with \$28,100) (Statistics Canada, 2002). But Canadian society is traditionally more egalitarian. Social security programs are generally more developed and more generous in Canada. For example, Canada has endowed itself with a public health program providing universal and free access to all hospital and medical services.

Paradoxically, or perhaps precisely because they have a more extensive social safety net, Canadians as a society appear to have adopted more of the values of individualism and secularism that characterize many Western societies. In Canada, religious attendance is lower, families are smaller and the marriage rate is lower, especially because common-law unions have gained ground at the expense of legal marriage.

While for some, the current American fertility pattern appears durable and below replacement fertility does not seem to be a problem for the United States (Morgan, 2000), it is hard to foresee a substantial rise in Canadian fertility (Bélanger, 2000). Indeed, this is reflected in the fertility assumptions made by the two countries' statistical bodies concerning the probable future course of fertility. The middle scenario in the most recent projections for the Canadian population (Statistics Canada, 2001) assumes a slight decrease in fertility, with the fertility rate quickly reaching 1.48 children per woman and remaining at this level until the end of the projection period in 2051.<sup>1</sup> By contrast, the middle scenario advanced by the U.S. agency foresees fertility increasing slowly and steadily and reaching 2.20 children per woman in 2050 (U.S. Census Bureau, 2000). Thus, the fertility rate for American women, which is already more than 30% higher than that of Canadian women, could in the future exceed it by nearly 50%. What is the explanation for this? Is it possible that the fertility rate of Canadian women will rise and in the near future reach levels comparable to those observed or projected in the United States?

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<sup>1</sup> Strictly speaking, the time horizon for the Canadian projections is 2026, with the different scenarios projecting that the fertility, mortality and mobility levels reached in 2026 will hold constant between 2026 and 2051.



This study seeks to explain the fertility differences that exist between the two populations. First, using various measures, the article describes the fertility differences observed between Canada and the United States. In the second section, a few possible explanations are explored. The populations of the two countries are compared in terms of different factors that are directly or indirectly associated with fertility. Among the factors directly associated with fertility, the analysis will compare contraceptive practices and the use of abortion in the two countries as well as differences as to the modes of entry into conjugal life: marriage and common-law union. The factors indirectly associated with fertility are numerous, and the study makes no claim to cover them exhaustively; instead it will focus on those indirect factors that are the most likely to vary across the two populations: religious practice and job insecurity among the young.

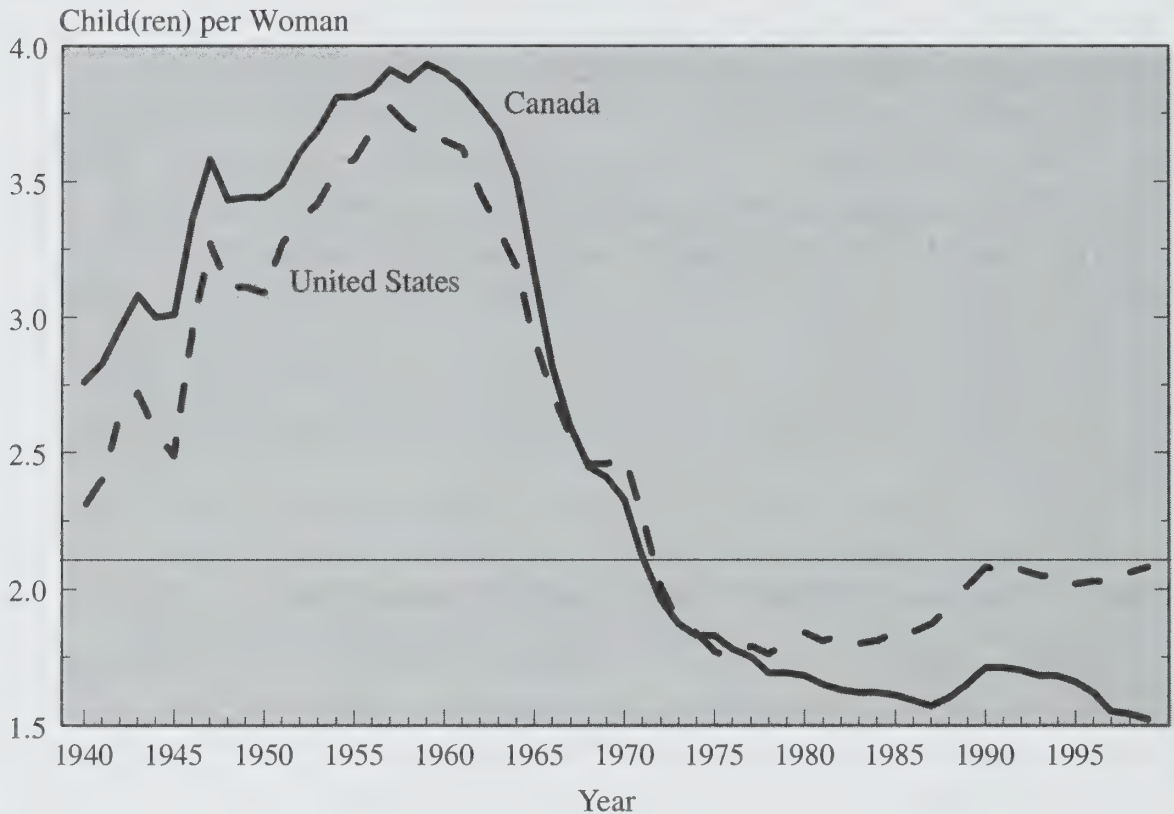
### **Fertility Differences Between Canada and the United States**

Figure 1 compares the trend in the total fertility rate of Canadian and American women over slightly more than half a century. In both countries, the course of fertility over the past half century has varied considerably, and while the broad trends are similar, there are also major differences.

In both countries, postwar prosperity favoured an increase in the fertility rate, which had been at historically low levels following the Great Depression of the 1930s. The baby-boom that shaped the post-war course of fertility in many Western countries was a greater phenomenon in the Anglo-Saxon countries, namely Canada, the United States, New Zealand and Australia—countries that experienced the largest increases in their fertility during this period. This was especially true for Canada, and until the mid-1960s, the fertility of Canadian women, as measured by the period rate, exceeded that of American women. At the height of the baby-boom in 1957, the total fertility rate reached 3.91 and 3.77 children per woman in Canada and the United States respectively.

With the revolution in birth control, both countries' fertility rates fell abruptly from the early 1960s to the mid-1970s. This period was marked not only by a decrease in the number of children born but also by growing childlessness and a lengthening of the childbearing period. The fertility rates of the two countries had fallen below the replacement level (which is currently about 2.1 children per woman) by the early 1970s and continued their slide, reaching approximately 1.7 children per woman toward the end of that decade. During that period, the two countries' rates overlapped almost completely, but since then the two curves have moved apart. The Canadian rate has continued to fall, despite a slight upturn in the early 1990s, while the fertility of American women began rising and recently reached the replacement level. *In 1999, the last year for which observations are available for both countries, the total rate reached 1.52 and 2.08 children per woman in Canada and the United States respectively.*

**Figure 1. Total Fertility Rate, Canada and United States, 1940-1999**

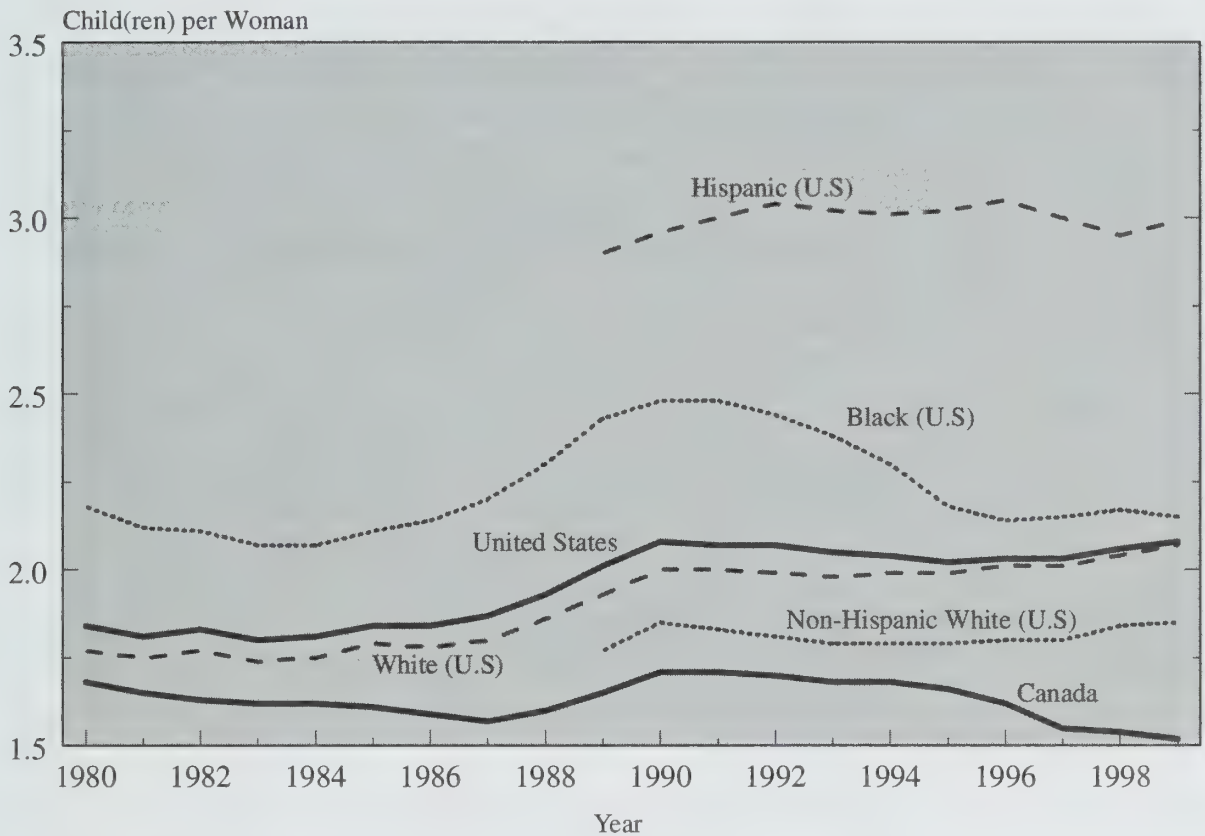


**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

In examining the differences in fertility observed between the two countries, one of the first sources of explanations that comes to mind is the make-up of the U.S. population by ethno-racial origin. In the United States, as elsewhere, there are major differences in fertility between sociocultural or ethnic groups. But since that country has large ethno-racial minorities that traditionally have higher fertility rates, could this fact alone explain the differences observed between the two countries with respect to the fertility of the general population? Specifically, could the widening gap in national fertility in favour of the United States be explained by the fact that the black and Hispanic minorities, historically more fertile than the white majority, represent a growing proportion of the U.S. population?

Figure 2, which shows the recent evolution of the total fertility rate of the U.S. population by ethno-racial origin, appears to go against this hypothesis. On the one hand, it is clear that black and Hispanic American women have higher fertility rates. The total rate for black American women increased between 1980 and the early 1990s, when it exceeded 2.4 children per woman. Subsequently, black women's fertility declined and by the end of the 1990s had returned to the initial levels of approximately 2.2 children per woman.

**Figure 2. Total Fertility Rate, Canada and United States by Ethno-racial Group, 1980-1998**



**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

The fertility of Hispanic American women remained at around 3.0 children per woman throughout the observation period. In the early 1980s, the fertility of American white women was only slightly higher than that of Canadian women (1.77 children per woman, as compared to 1.68). However, throughout the observation period, the fertility of the former group exhibited an upward trend that was especially pronounced between 1987 and 1990. By contrast, the fertility of Canadian women tended to decline throughout the period, except for a short interval between 1987 and 1990 when the rate rose from 1.57 children per woman to 1.71 children per woman. At the end of the period, the fertility of white American women (2.04 children per woman) was much closer to that of black American women (2.17 children per woman) than to the fertility of Canadian women (1.52 children per woman). However, it should be noted that some Hispanic women are white, which raises the average for the group.

Since 1989, U.S. vital statistics data have distinguished between Hispanic and non-Hispanic white women. The higher fertility rate of Hispanic white women appears to explain nearly half the difference observed between the



TFR of Canadian women and that of white American women. Nevertheless, *all American ethno-racial groups exhibit a higher period fertility rate than that of Canadian women*. For 1999, a gap of 0.3 children is observed between the TFR of Canadian women and that of non-Hispanic white American women (1.85 children per woman), the group exhibiting the lowest fertility rate in the United States. *Therefore, the ethnic make-up of the U.S. population does not entirely explain the differences in fertility observed between the two countries. At most, the higher fertility of black or Hispanic American women would appear to explain 40% of the difference observed in 1999.*<sup>2</sup>

The total fertility rate is a cross-sectional measure of the intensity of the phenomenon, and its level may be influenced by a change in the childbearing tempo. Women in recent cohorts have tended to remain in school longer than those in earlier cohorts, and both men and women in the younger cohorts have been slower to enter the labour market. Perhaps adapting to these changes, women in recent cohorts have tended to postpone childbearing.

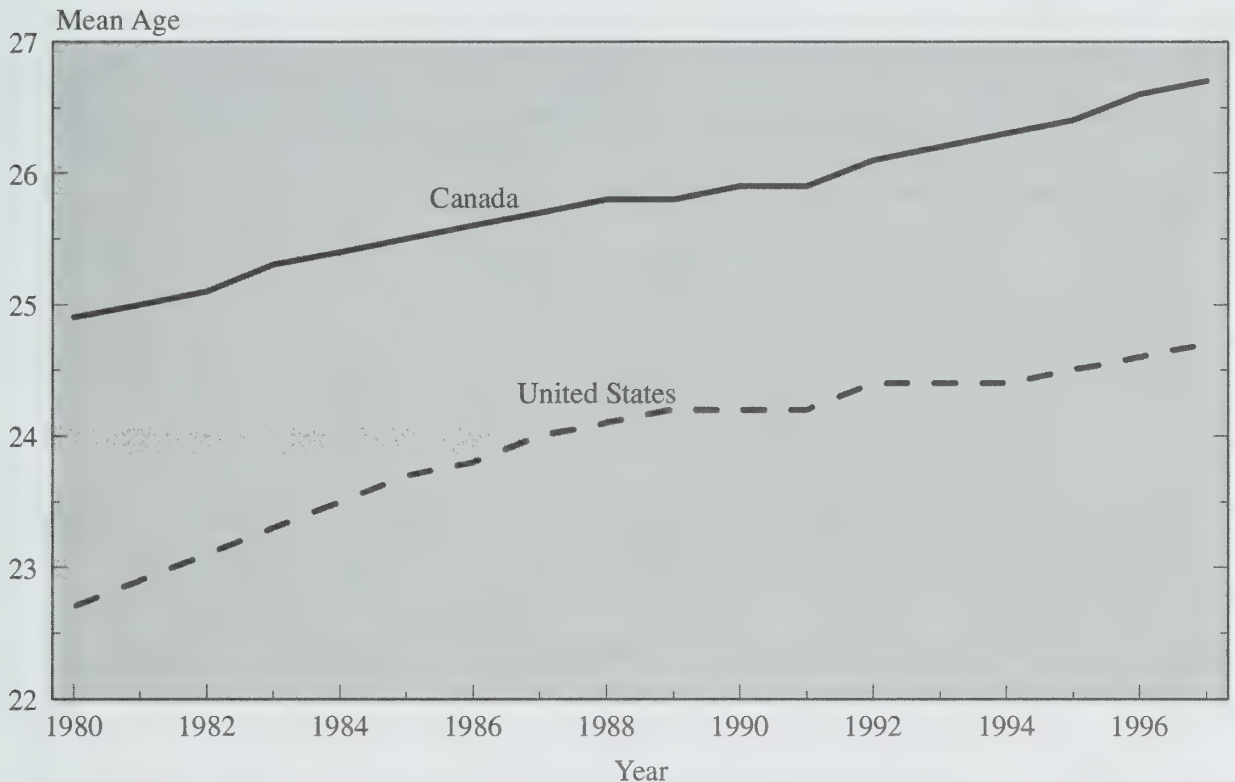
In Canada, the mean age at childbearing has been rising since 1974, while the proportion of high-order births has declined over time. In fact, for each parity, the mean age at childbearing has begun to increase earlier, and it has been rising for all birth orders since the mid-1960s. In 1980, the mean age at childbearing was 27.0 years, and it reached 28.7 years in 1999. In Canada, the mean age at the first birth was somewhat lower in 1980, at 25 years. It was approaching 27 years in 1999. In the United States, childbearing tends to occur earlier, but the age at childbearing also rose between 1980 and 1999, going from 22.6 years to 24.7 years (Figure 3). A comparable phenomenon is therefore observed in that country, but it has been less pronounced since the late 1980s. The change over time is also comparable for mothers' age at subsequent births, with the length of the interval between births remaining practically unchanged. In Canada, for example, the mean age at childbearing is 29.5 years for second births (27.5 in 1980) and 30.7 years for third births (29.4 in 1980). In the United States, the mean age at the second birth was 27.6 years in 1997 (25.4 years in 1980) and 29.1 years at the third birth (27.3 years in 1980). *Canadian women postpone childbearing more than American women, and this trend intensified between 1990 and 1997*. In a situation in which some childbearing is postponed, the period rate underestimates female fertility, since the births that successive cohorts of women will have are distributed over a longer period.

In neither country has any female cohort yet had a completed fertility rate as low as the level reached by the total fertility rate. To get a good grasp

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<sup>2</sup> The gap at the national level is 0.56 children per woman, while the gap between non-Hispanic white American women and Canadian women is 0.33 children. Assuming, in the interest of simplicity, that the Canadian population is homogeneous, the difference between these two numbers (0.23 children) represents the proportion attributable to the higher fertility of black or Hispanic American women, or 41% of the total difference.

**Figure 3. Mean Age at First Birth, Canada and United States, 1980-1998**



**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

of the phenomenon, it will be necessary to analyse cohort fertility. Table 1 looks at groups of cohorts of American and Canadian women born after 1945 and compares their cumulative fertility at different ages. The women in some of these cohorts have reached age 50 and thus have completed their fertile period. For them, the table therefore shows the total number of children that they have ultimately brought into the world (their completed fertility) and their overall fertility history. Thus the actual childbearing tempo of the women in these cohorts can be compared.

American women in the cohorts born between 1945 and 1954 had slightly more children than Canadian women in the same cohorts (90 and 106 children more per 1,000 women for the 1945-1949 and 1950-1954 cohorts respectively). On the other hand, it is worth noting that until 30-34 years of age, the Canadian women in the first group of these cohorts had a cumulative fertility—the average number of children that they had borne up to a given age—that was slightly higher than that of their American counterparts. For example, at 30-34 years of age, Canadian women born between 1945 and 1949 had already, on average, given birth to 1.86 children, whereas their American counterparts had, on average, had 1.81 children. This indicates that the Canadian women in these cohorts were tending to have their children earlier, while their American counterparts had a higher fertility rate beyond age 30.

**Table 1. Completed or Cumulative Fertility Rates at Various Ages (per 1,000 Women) for Selected Cohort Groups, Canada and United States, 1945-1949 to 1975-1979**

Age Group	Birth Cohorts						
	1945-49	1950-54	1955-59	1960-64	1965-69	1970-74	1975-79
Canada							
20-24	697	525	447	370	319	323	291
25-29	1,399	1,158	1,036	913	848	774	...
30-34	1,860	1,628	1,525	1,446	1,358	...	...
35-39	2,037	1,834	1,770	1,714	...	...	...
40-44	2,081	1,890	1,836	...	...	...	...
45-49	2,085	1,896	...	...	...	...	...
United States							
20-24	684	560	503	489	478	525	523
25-29	1,369	1,140	1,090	1,048	1,062	1,087	...
30-34	1,813	1,638	1,573	1,571	1,583	...	...
35-39	2,091	1,891	1,868	1,891	...	...	...
40-44	2,163	1,987	1,978	...	...	...	...
45-49	2,175	2,002	...	...	...	...	...
Variations							
20-24	13	-35	-56	-119	-159	-202	-232
25-29	30	18	-54	-135	-214	-313	...
30-34	47	-10	-48	-125	-225	...	...
35-39	-54	-57	-98	-177	...	...	...
40-44	-82	-97	-142	...	...	...	...
45-49	-90	-106	...	...	...	...	...
Variations (in percent)							
20-24	2	-7	-13	-32	-50	-63	-80
25-29	2	2	-5	-15	-25	-40	...
30-34	3	-1	-3	-9	-17	...	...
35-39	-3	-3	-6	-10	...	...	...
40-44	-4	-5	-8	...	...	...	...
45-49	-4	-6	...	...	...	...	...

**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

Canadian women have gone from having their children earlier than American women to having them later. Starting with the 1955-1959 cohorts, American women at all ages have a higher cumulative fertility than Canadian women. From one group of cohorts to the next, the gap widens between the cumulative fertility of Canadian women and that of American women. For example, for the group of cohorts born between 1970 and 1974, the cumulative fertility level of American women aged 30 to 34 on January 1, 1999 is 40% greater than that of Canadian women. Thus the cohorts reflect the effect of the steeper decline in fertility before age 30 that is observable for Canadian women in



Figure 4. For all the cohort groups, cumulative fertility, at the highest age for which it can be calculated using the statistics available, is greater in the United States than in Canada. ***The higher fertility of American women shown by the period rate is also observed for all groups of cohorts born after 1945.*** There is every indication that the completed fertility rate of the cohorts that have not yet come to the end of their fertile years will remain lower in Canada than in the United States. It is therefore important to pursue our analysis by looking at rates by age.

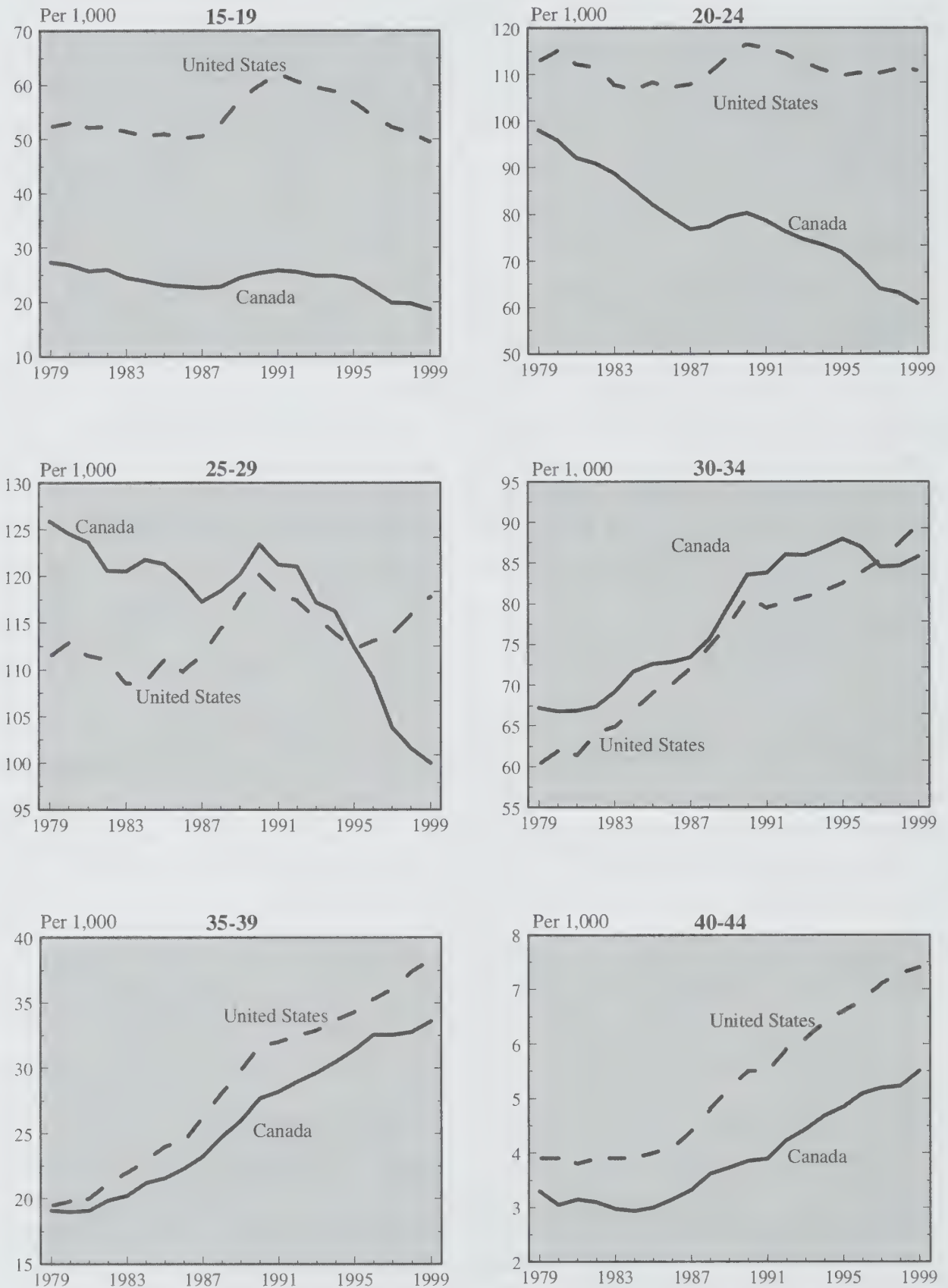
### *Fertility by Age*

Over the past twenty years, the childbearing tempo of Canadian and American women has slowed, although more markedly for Canadians. The fertility rates of women 30 years of age or more have increased at nearly the same rate in the two countries. ***The fertility of younger American women has held steady and even increased slightly among those aged 25 to 29, while that of Canadian women of the same age has fallen substantially. Between 1979 and 1999, there was a decrease of nearly 40% in the fertility of Canadian women aged 20 to 24 and approximately 25% among those aged 25 to 29*** (Figure 4). Throughout the observation period, the fertility of American women under 25 years of age exceeded that of Canadian women of the same age, but the gap between the two populations has widened over time. In both countries, fertility peaks at 25-29 years of age; but before 1995, the fertility of Canadian women in this age group was higher than that of American women in the same age group, whereas in 1999 it was nearly 15% lower. Between 30 and 34 years of age, the rates follow a similar upward trend in the two countries. After age 35, the rates also rise in both countries, but the increase is somewhat greater in the United States. Nevertheless, it should be kept in mind that the fertility of women over 35 years of age is low and its effect on the total fertility rate is negligible.

Figure 5 sheds more light on the evolution of the fertility rates of Canadian and American women over the past twenty years. The upward trend in fertility rates beyond age 30 is similar in the two countries, and the curves almost overlap, both in 1980 and in 1999. By contrast, the higher fertility of young American women, which were already perceptible in 1980, increased thereafter, and at the end of the observation period the differences between the two curves before age 25-29 were greater. ***The growing fertility gap between American women and Canadian women is thus due to the fact that young American women have continued to exhibit higher fertility levels while young Canadian women's fertility has declined substantially.***

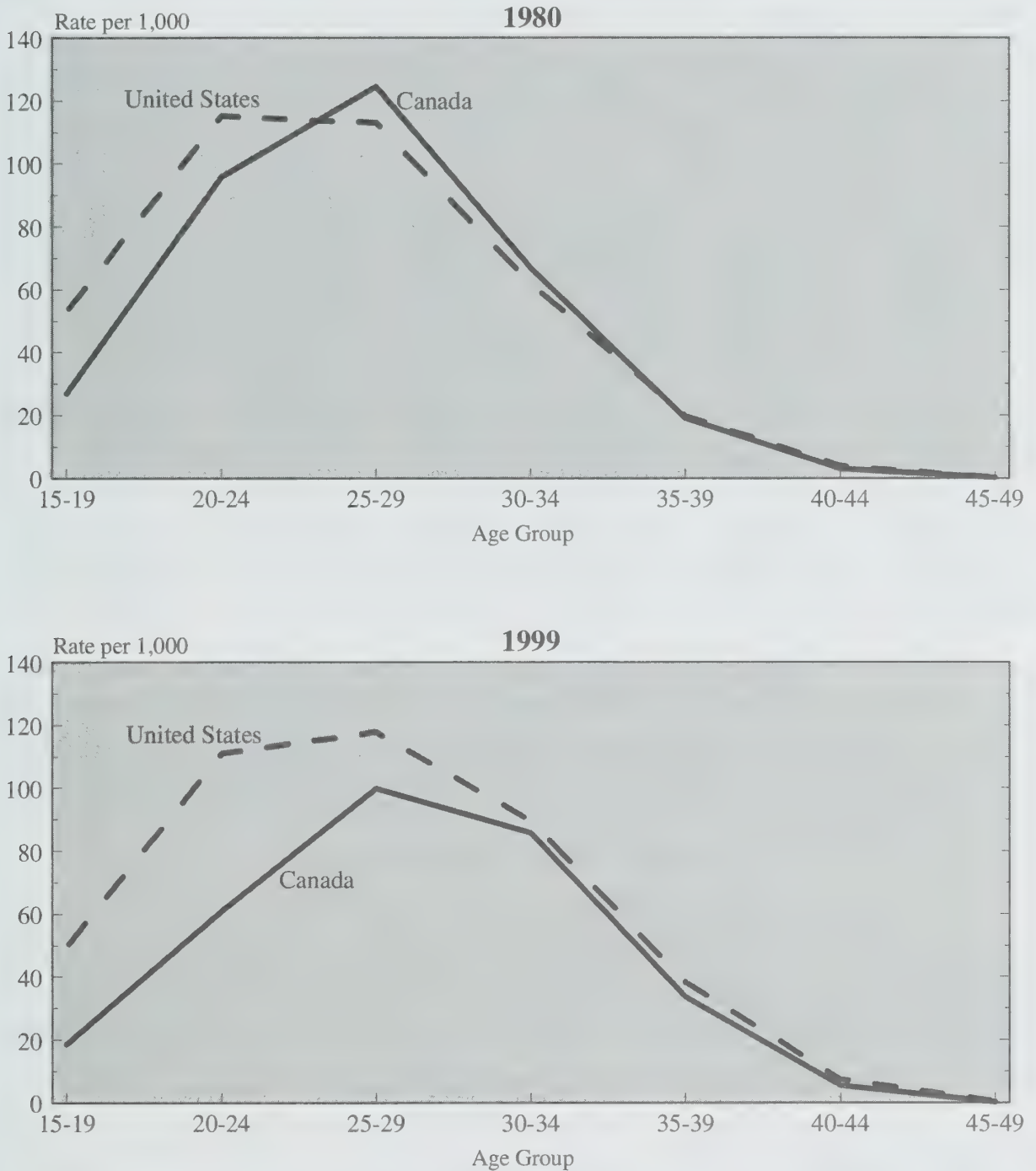
It can be calculated that ***approximately 30% of the gap observed between the total fertility rates of American and Canadian women in 1999 results from the higher fertility of American teenage girls.*** The fertility rate at 15-19

**Figure 4. Change in Fertility Rates by Age Group, Canada and United States, 1979-1999**



**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

**Figure 5. Fertility Rates by Age Group, Canada and United States, 1980 and 1999**



**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

years of age exceeds 50 per 1,000 in the United States, whereas in Canada it is less than 20 per 1,000. No other industrialized country has juvenile fertility rates as high as those observed in the United States. The fertility rate of American teenage girls is more than double that in other industrialized countries, including Canada, and ten times greater than in Japan and the Netherlands (Maynard,



1996). Contrary to what one might expect, it is not solely due to the ethnic composition of the U.S. population, since the white population also has higher rates (40 per 1,000) than those observed elsewhere.

In many respects, this situation is not enviable. At the individual level, having children too early is, for the mother, often associated with an interruption of schooling and the problems that this can entail for integrating into the labour market. It is also associated with a higher risk of single parenthood, living below the poverty level and experiencing long periods on social assistance (Moore et al., 1993; Maynard, 1996). The socio-economic disadvantages of teenage pregnancy in adulthood are perceptible even for young women who come from relatively wealthy backgrounds and those who have completed their secondary schooling (Olausson et al., 2001). Furthermore, the harmful consequences are not limited to the mothers. They also extend to the health and future socio-economic status of the children born as a result of these pregnancies. The chances of educational, economic or family “success” are lower for the children of a teenage mother, even when differences in the socio-economic characteristics of the mother are taken into account (Haveman et al., 1996).

The fertility of American teenage girls is a concern for officials who closely follow how it is developing (Ventura et al., 2001) and seek to reduce it by means of various incentive policies (Donavan, 1999). The vast majority (87%) of teenage pregnancies in the United States are unwanted (Maynard, 1996). It is therefore possible that the U.S. total fertility rate will fall if efforts to reduce the fertility of teenage females are successful.

On the other hand, *nearly two-thirds (60%) of the difference observed between the American and Canadian rates is due to the lower fertility of Canadian women aged 20 to 29*, the age at which procreation is physiologically easier. Is this because Canadian women want fewer children than American women?

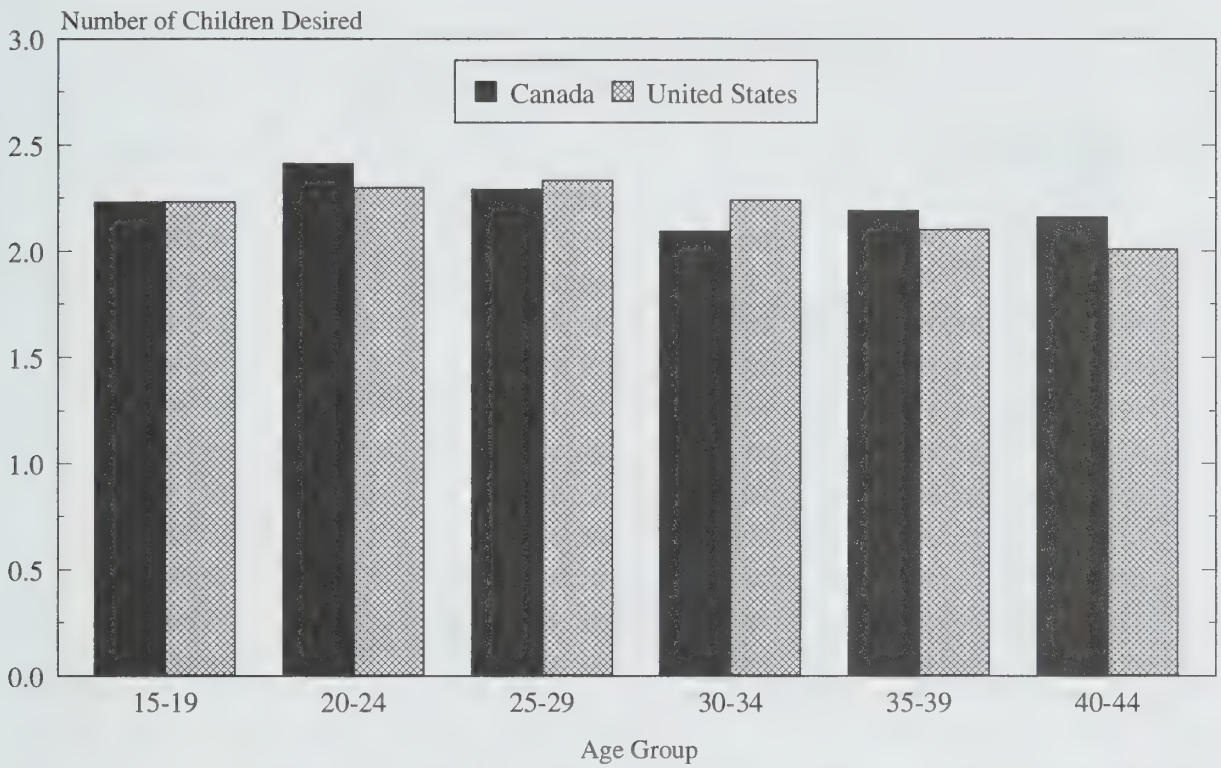
### *Fertility Intentions*

Figure 6 appears to rule out this hypothesis. It shows the average number of children wanted<sup>3</sup> by respondents to the two surveys, both conducted in 1995. That number varied between 2.0 children for American women aged 40 to 44 at the time of the survey and 2.4 children for Canadian women aged 20 to 24. Also, in both countries, the number of children that the women

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<sup>3</sup> The concepts are not exactly the same in the Canadian and U.S. surveys. In Canada, women were asked, “What is the total number of children that you intend to have including those that you have now?” On the other hand, the U.S. survey asked women who reported intending to have another child the minimum and maximum number of children that they intended to have, and it was the average of these two numbers that was used to calculate the average number of children desired.

**Figure 6. Average Number of Children Desired by Age Group, Women Aged Between 15 and 44, Canada and United States, 1995**



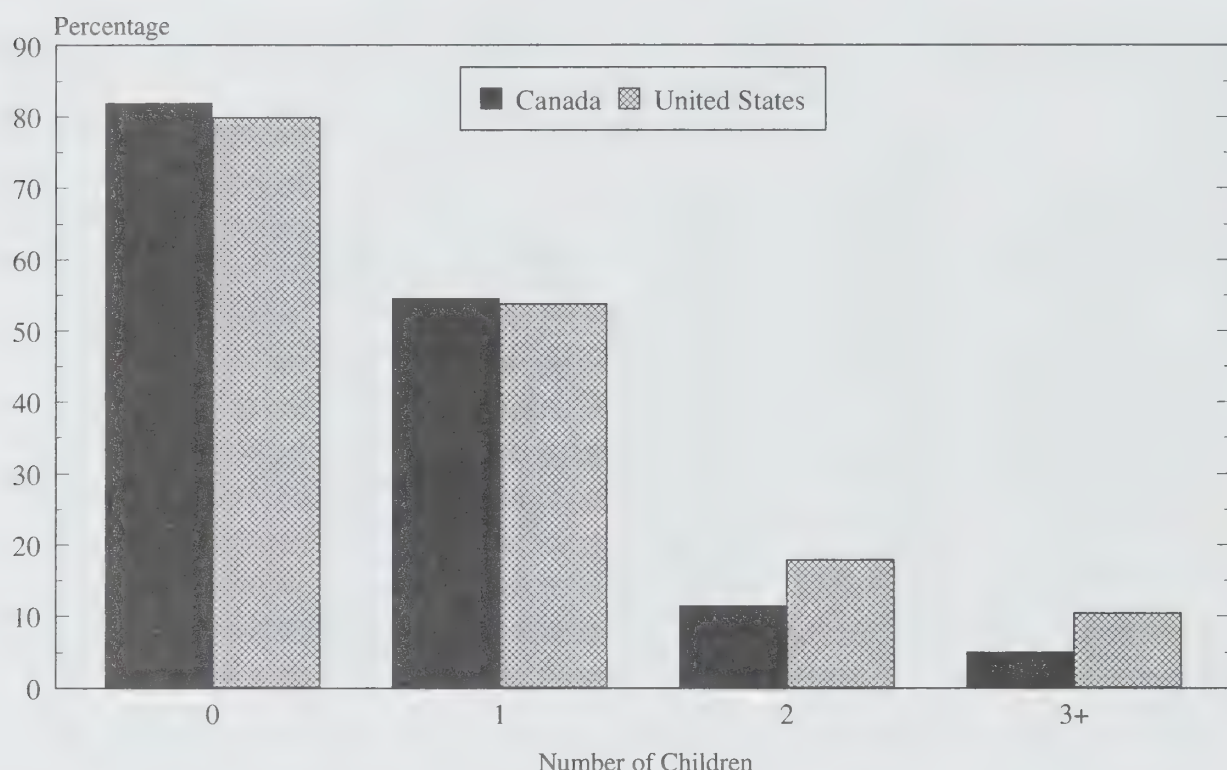
**Sources:** Statistics Canada, General Social Survey 1995 and National Centre for Health Statistics, National Survey of Family Growth 1995.

reported wanting to have increased with age up to the 25-29 age group and subsequently declined to approximately 2 children per woman. *Canadian women of childbearing age (15 to 44 years of age) reported intending to have an average of 2.22 children, a number entirely comparable to that reported by American women (2.19 children).*

The appeal of having a standard two-child family is also clear from Figure 7, which shows the proportion of females aged 15 to 44 who reported wanting at least one more child depending on the number of children already born. The great majority of women who had either no child or one child responded that they wanted to have at least one more child: 80% or more of childless women want to have at least one child, and 54% of those with one child want to have another child. However, the proportion of women wishing to have another child falls off dramatically among those who already have two children: 11% of Canadian women and 18% of American women who have had two children report wanting another child, and these proportions decline again among those with three or more children. *The desire to start a family and the desire to reach the “standard” of two children are identical in Canada*



**Figure 7. Proportion of Females Aged 15 to 44 Who Report Wanting at Least One More Child According to Number of Children Already Born, Canada and United States, 1995**



**Sources:** Statistics Canada, General Social Survey 1995 and National Centre for Health Statistics, National Survey of Family Growth 1995.

*and the United States, but the desire for a larger family (three or four children) seems to be greater among American women than among Canadian women respondents*, as may be seen from the fact that for American women who already have two or more children, nearly twice the proportion want to have at least one more child.

There is some question as to the value to assign to responses concerning fertility intentions. On this subject, opinions vary. Analysing a sample of nearly 3,000 non-Hispanic white women in a U.S. longitudinal study, Schoen et al. (1999) were able to determine that at the individual level, intentions regarding future fertility (i.e., whether or not to have a child) and the degree of certainty expressed by the two spouses were strongly associated with the respondents' fertility behaviour over the five years since the survey was first administered. Others doubt that fertility intentions expressed in the form of the number of children desired can be a useful indicator of the "demand" for children in low-fertility countries, since these desires are too heavily influenced by social stereotypes such as the norm of the two-child family (Livi Bacci, 2001).



In any case, in most developed countries, the average number of children desired approaches two or slightly exceeds that level. In these countries, where the fertility rate is below the replacement level, the average number of children that women report wanting generally exceeds the number that they will actually have. This is probably especially true where the respondent is young when asked how many children she wants to have, since it sometimes seems easier today to control fertility in order to prevent an unwanted birth than to create the financial and family conditions required for the long-term commitment entailed in having a child. Thus it is useful at this point to examine whether these conditions, and the capacity to satisfy them, vary between the two countries.

### **A Few Possible Explanations**

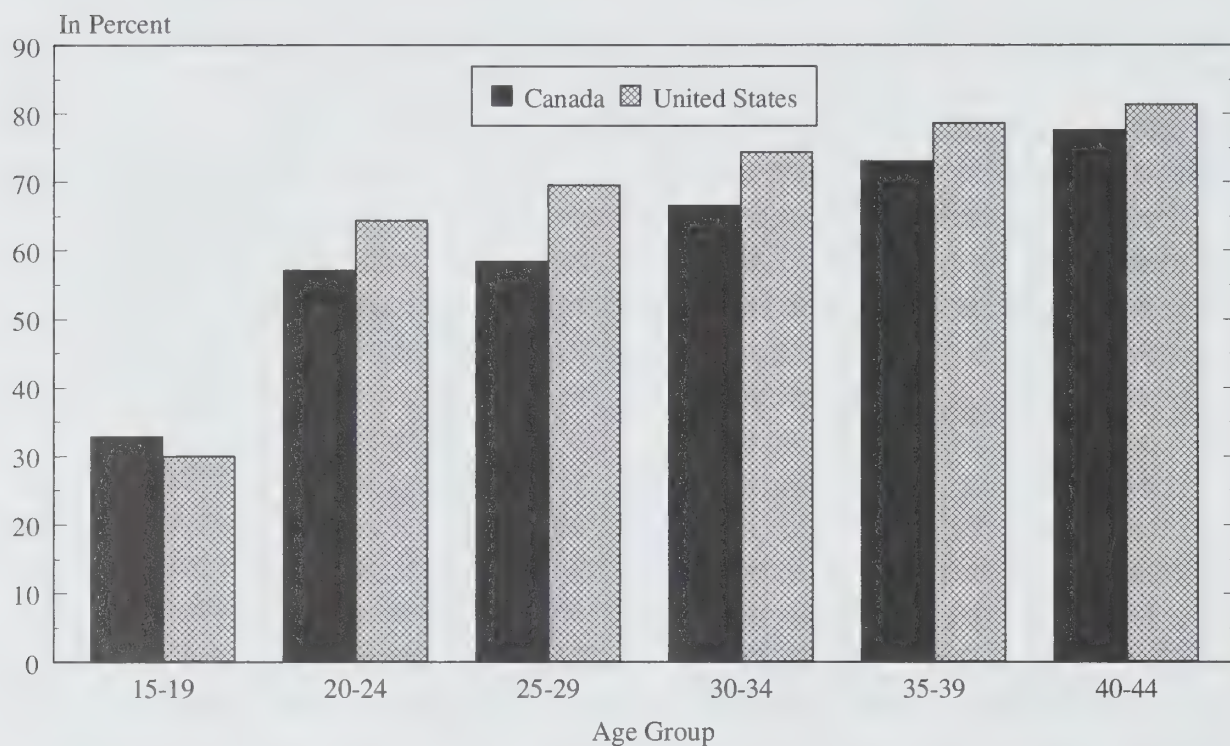
Many demographers, sociologists and economists have tried to explain variations in fertility. For this comparative study, the conceptual framework proposed by Davis and Blake (1956) seems appropriate, and a number of factors that directly influence the fertility level are compared for the two countries. Bongaarts (1976) looks at eight of the eleven factors identified by Davis and Blake as directly influencing fertility: nuptiality, contraception, abortion, post-partum amenorrhoea, frequency of sexual relations, intra-uterine mortality, sterility and the duration of the fertile period. The first three factors seem more important for explaining differences in fertility between two post-transitional countries<sup>4</sup> such as Canada and the United States. The influence of the last five factors on potential fertility can be only marginal, since fertility levels are less sensitive to a change in these factors, and furthermore the make-up of the two populations studied varies relatively little with respect to these factors. They are more important for explaining variations in fertility between pre-transitional societies, in which the fertility level of married women approaches the natural fertility level. Therefore, the following analysis focuses on only the first three factors and compares the composition of the two populations in relation to them.

Contraception (including access to and use of an effective method) is by far the factor that has the greatest effect on the likelihood of conception and live births and therefore on the fertility rates observed in developed countries where the total fertility rate is less than 3.0 children per woman (Bongaarts, 1982). The most effective contraceptive methods—birth control pills, implants, injections and IUDs, which can be grouped under the heading of medical or pharmaceutical methods—are generally less accessible, since their use requires a prescription and a doctor's involvement and hence a medical consultation. The same is true for sterilization for contraceptive purposes, which requires surgery.

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<sup>4</sup> This refers to the fact that the two populations have low birth and death rates characteristic of societies that have completed their demographic transition and also to the fact that these two societies have completed the transition from natural fertility to controlled fertility.

**Figure 8. Proportion of Women Aged 15 to 44 Who Use a Contraceptive Method by Age Group, Canada and United States, 1995**



**Note:** For United States: Sexually active women. For Canada: all women.

**Sources:** Statistics Canada, General Social Survey 1995 and National Centre for Health Statistics, National Survey of Family Growth 1995.

In Canada, the public health system provides universal and free access to medical services, whereas in the United States, such services can generate substantial costs. On the other hand, a number of states have family planning clinics, with one of their roles being to provide access to contraception to those who would not have it otherwise (Donavan, 1999). Nevertheless, medical methods and sterilization for contraceptive purposes are more accessible in Canada because they are less costly to users.

Figure 8 compares the proportions of Canadian and American women who report using a contraceptive method by age group. The proportion of users increases with age in both countries, rapidly between the 15-19 and 20-24 age groups and more slowly thereafter. While the trends are similar in the two countries, the figure shows that starting with the 20-24 age group, the proportion of users estimated from the U.S. survey is slightly higher than the proportion estimated for the Canadian population according to the General Social Survey. The gap is widest for the 25-29 age group, where the proportion of users of a contraceptive method is roughly 20% higher in the United States. This finding would seem to run counter to expectations, considering that the



**Table 2. Percentage Distribution of Female Users of Contraceptive Methods by Method Used and Age Group, Canada and United States, 1995**

Age Group	Canada				United States			
	Sterilization	Pharmaceutical	Barrier and Natural	Total	Sterilization	Pharmaceutical	Barrier and Natural	Total
15-19	0.0	86.0	14.0	100.0	0.6	57.3	42.1	100.0
20-24	3.6	77.1	19.3	100.0	5.1	61.9	33.0	100.0
25-29	19.6	59.6	20.8	100.0	22.7	45.0	32.3	100.0
30-34	44.1	34.7	21.3	100.0	41.3	30.9	27.8	100.0
35-39	68.9	13.6	17.5	100.0	62.2	12.8	25.0	100.0
40-44	84.6	3.8	11.5	100.0	73.7	6.8	19.5	100.0
Total	<b>45.8</b>	36.7	<b>17.5</b>	100.0	<b>41.4</b>	30.6	<b>28.0</b>	100.0

**Sources:** Statistics Canada, General Social Survey 1995 and National Centre for Health Statistics, National Survey of Family Growth 1995.

fertility of American women under age 30 is greater than that of Canadian women of the same age. This counterintuitive result is probably due to the fact that the American survey asks the questions regarding contraception only to women who are sexually active. While the Canadian survey asked those questions to all women.

On the other hand, *Canadian women who use contraception appear to use more effective contraceptive methods than their American counterparts*. For example, 28% of American users report using a natural method (coitus interruptus, the calendar) or a barrier method (condom, spermicide foam, diaphragm, etc.), compared to 17% in Canada (Table 2). In Canada, 46% of women using contraception opted for sterilization compared with 41% in the United States, and pharmaceutical methods (the pill, IUD, implant) are more popular in Canada (37%) than in the United States (31%).

The younger the age group, the wider the gap between the proportions of Canadian and American women using a pharmaceutical method. For example, whereas in Canada 86% of users aged 15 to 19 use a pharmaceutical method (primarily the pill) compared to 14% who use a natural or a barrier method (primarily the condom), these proportions are 57% and 42% respectively in the United States.

Clearly, the use of a less effective contraceptive method means a higher risk of unwanted or unplanned pregnancy, greater use of abortion and a larger proportion of unwanted births. There is an abundant literature in the United States on the high incidence of unwanted pregnancies (Henshaw 1998, 2001; Jones et al. 1989). It is estimated that nearly half of all pregnancies (49%) in the United States in the first half of the 1990s were unwanted. Approximately half of them ended in an abortion. This left a sizable proportion (31%) of births that were unwanted (Frejka, 2002). For some women, it is only the timing of the pregnancy that is not planned, whereas the child is wanted.



Nevertheless, a substantial proportion of all births are not desired. For example, it is estimated that 10% of all births that took place in the first half of the 1990s were undesired (Abma et al. 1997).

In Canada, there is no recent survey by which to estimate the proportion of unwanted pregnancies. Only the 1984 survey of the family and fertility included questions on the circumstances surrounding each pregnancy. For each pregnancy reported, the survey asked the respondent whether she had intended to become pregnant at that time, whether she would have preferred to be pregnant later or if she would have preferred not to have any more children. Jones et al. (1989) conducted an in-depth comparative study of the results of this survey. The comparison is essentially made with the situation in the United States, although the study compares the birth planning situation in some twenty industrialized countries. The authors also give special attention to family policies, in particular family planning services in each country, using in-depth interviews with officials responsible for the development and evaluation of family policies as well as other experts. They conclude that in the early 1980s, the proportion of unplanned or unwanted pregnancies was much larger in the United States than in other countries—roughly 60% higher than in Canada, Belgium or Sweden, more than double the proportion in the United Kingdom and five times higher than in the Netherlands.

As regards the comparison of the U.S. and Canadian situations, their conclusions are clear. The contraceptive methods used are clearly more effective in Canada than in the United States, with the result that the rate of unwanted pregnancy is lower in Canada. Canadian women appear to assign greater importance to the prevention of unwanted pregnancies by using more effective contraceptive methods, and by better accepting the problems that may be associated with their use (Jones et al. 1989).

Looking at the two countries' family planning systems, the authors note four major differences, which they see as contributing to Canadians' success in preventing unwanted births:

- 1) The lack of an economic barrier to obtaining effective contraception. Canadian women can obtain prescriptions for oral contraceptives quickly and at no charge. Furthermore, sterilization for contraceptive purposes may be obtained easily and at no charge;
- 2) The availability of information on contraceptive methods as soon as young women become sexually active. When becoming contraceptive users, Canadian women of all social classes can obtain detailed advice—usually on an individual basis—on sexuality, contraceptive methods and the importance of avoiding early and unwanted pregnancies;
- 3) A more positive attitude toward the pill. Family planning services encourage the use of the contraceptive pill, the most effective method;

- 4) More birth control services to high school students. The schools supply information on available contraceptive methods and family planning services through school nurses or social workers.

According to the authors, these differences probably explain why the rate of unwanted pregnancy is lower in Canada. This reasoning can easily be extended to explain why abortion is also less common there.

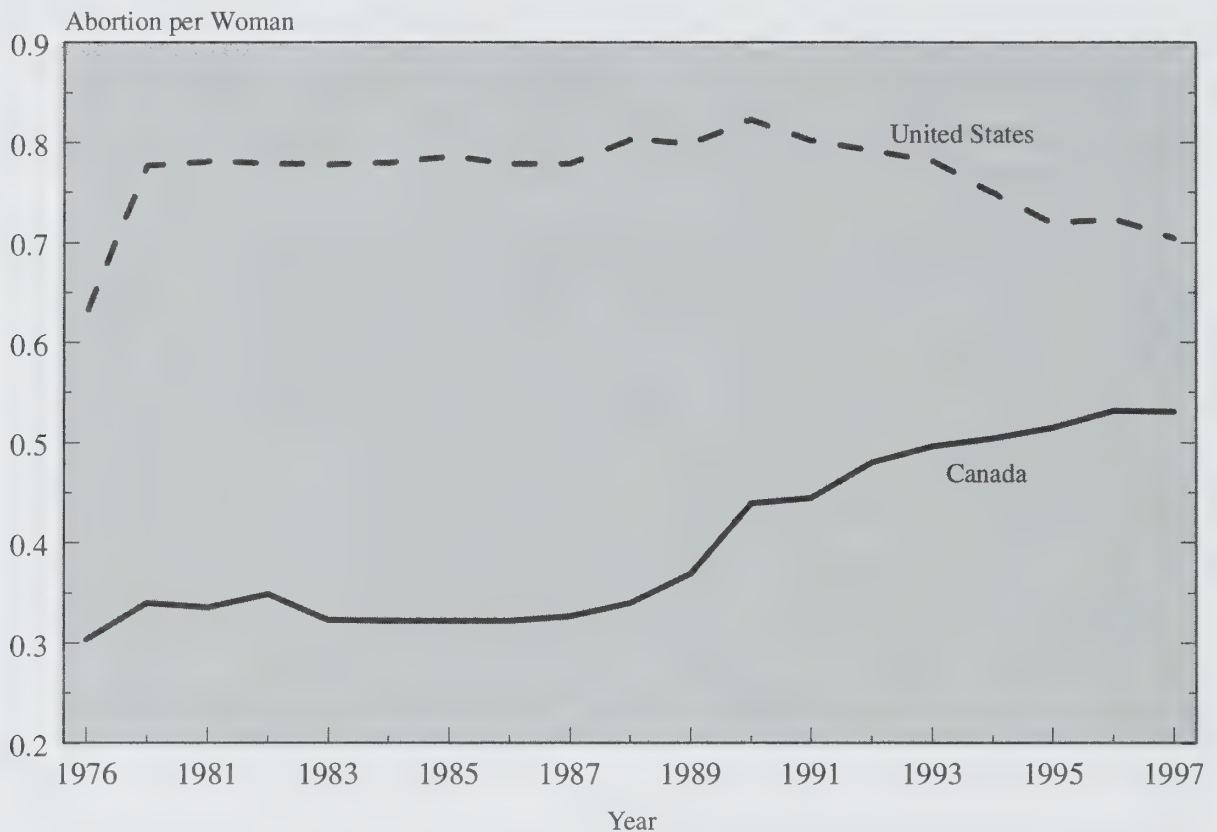
Even though access to abortion has been a controversial political issue in the United States, ***the total abortion rate has consistently been higher in the United States than in Canada over the past 20 years***. Between 1980 and 1990, the total abortion rate was twice as high in the United States, where it remained at about 0.8 abortions per woman, while the Canadian rate ranged between 0.3 and 0.35 abortions per woman (Figure 9). Since 1990, the gap between the two countries has narrowed, with the U.S. rate declining (it stood at 0.7 abortions per woman in 1997) and the Canadian rate rising (0.5 abortions per woman in 1997). In both countries, the abortion rates are higher for young women. The main factor causing the two countries' rates to move closer together is a reduction in the gaps for the abortion rates of women under 30 years of age (Table 3). Since 1990, the abortion rate for American teenage girls (15-19 years) has declined by nearly 30% and that of women aged 20 to 24 has decreased by nearly 15%, while in Canada these rates have increased—slightly (6%) for the younger age group but more substantially (26%) for women aged 20 to 24. Nevertheless, abortion rates remain higher in the United States than in Canada for all age groups.

### *Marriage, Cohabitation and Divorce*

Both in Canada and the United States, an increase is observed in the non-marital fertility rate, but the majority of births still take place within marriages. In 1980, the proportion of births to unmarried women stood at 13% in Canada and 18% in the United States. This proportion has been rising steadily over the past 20 years and in 1999, the corresponding percentages were 31% and 33% in Canada and the United States respectively (Ventura and Bachrach, 2000). This trend results from the growing acceptance of another form of conjugal life, namely common-law unions. Whereas in the past these often functioned as a “trial marriage,” they are tending increasingly to take the place of legal marriage.

While the fertility of common-law couples is increasing over time, the fertility rate of married women is nevertheless much higher than that of women in common-law unions. Having a child is a long-term commitment, and many women still prefer to do so within the framework of a legal marriage. Thus, the number of children per woman continues to be higher for married women than for women who are in common-law unions or not living with a partner. For Canada as a whole, the total fertility rate for married women is nearly

**Figure 9. Total Abortion Rate, Canada and United States, 1976-1997**



**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

double that of women in common-law unions, both for unions formed between 1975 and 1984 and those formed between 1985 and 1994 (Dumas and Bélanger, 1997: 169). The mode of conjugal living, while less decisive a factor than in the past, is still a major intervening variable in explaining fertility differences.

Compared to Canadian women, American women tend to marry in greater proportions and to do so earlier in life. Figure 10 shows, by age group, the proportion of women who reported being married at the time of the 1995 surveys. Before age 35, the proportions are higher in the United States than in Canada, and the younger the respondent, the wider the gap. For example, while nearly 5% of American females aged 15 to 19 reported being married in 1995, the proportion of married respondents among Canadian females of the same age was less than 1%. Similarly, in the 20-24 age group, the proportion of married women was 40% higher in the United States, with these proportions being 16.6% and 28.0% in Canada and the United States respectively.

According to the two 1995 surveys, nearly 20% of women aged 20 to 24 were living in common-law unions in Canada, while the corresponding



**Table 3. Abortion Rate (per 1,000) by Age Group, Canada and United States, 1990 and 1997**

Age Group	Canada			United States		
	1990	1997	Variation (%)	1990	1997	Variation (%)
15-19	20.4	21.6	5.9	40.3	27.5	-31.8
20-24	26.9	34	26.4	56.7	49.2	-13.2
25-29	17.1	22.6	32.2	33.9	33.3	-1.8
30-34	11.3	14.1	24.8	19.7	18.1	-8.1
35-39	6.8	8.3	22.1	10.8	9.6	-11.1
40 +	2.1	2.9	38.1	3.2	3.1	-3.1

**Sources:** Statistics Canada, Demography Division and the National Centre for Health Statistics Internet site.

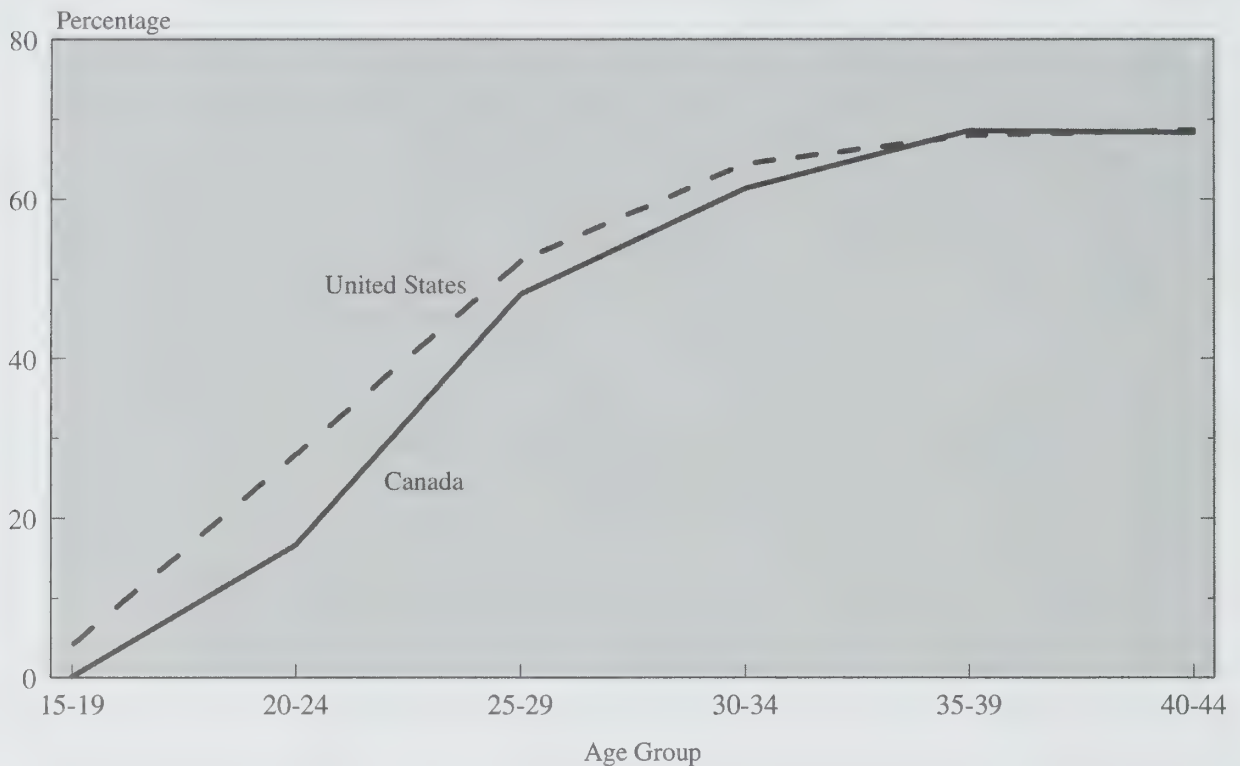
proportion in the United States was 11%. The higher marriage rate of American women is largely due to the greater appeal of common-law unions as a mode of conjugal life in Canada, but even so, before age 25 the proportion living in a couple relationship is higher (by about 8%) in the United States than in Canada. Possibly young Canadians postpone forming a union because it is harder for them to integrate into the labour market than their American counterparts.

*Factors Indirectly Associated with Fertility*

In the conceptual framework proposed by Davis and Blake, contraceptive practices, abortion use and marriage (as well as the other variables mentioned above) are intervening variables between socio-economic and cultural variables and fertility itself. For example, the use of abortion and the choice of one mode of conjugal life instead of another may be influenced by an individual's religious practice; for young persons, union formation may be influenced by the ease or difficulty of achieving the financial independence that steady employment may offer; the choice of a contraceptive method and its effective use may be influenced both by financial constraints and by the ability to receive information and use it appropriately.

Although not intended to be exhaustive, the following section seeks to shed light on a few of the relationships that exist between social-economic and cultural variables and fertility and to show that they may differ between the two countries. The choice of the variables analysed results in part from considerations such as those mentioned in the preceding paragraph and from the results of an analysis conducted in Canada. Using a transitions analysis model, Bélanger and Dumas (1998) and Bélanger (2000) have shown that out of a set of socio-cultural variables, several—employment, education level,

**Figure 10. Proportion of Women who Report Being Married at the Time of the Survey by Age Group, Canada and United States, 1995**



**Sources:** Statistics Canada, General Social Survey 1995 and National Centre for Health Statistics, National Survey of Family Growth 1995.

religious practice and country of birth—had significant effects on the likelihood of having a second or third child. Some of these variables are of particular interest here.

#### *- Religious Practice*

Religious practice can serve as an indicator of a society's level of traditionalism or secularism. It indirectly influences an individual's fertility, especially in that it affects the choice of marriage as the mode of conjugal life and the stability of the union. In Canada, individuals who do not practise their religion are nearly three times as likely to form a common-law union as those who participate in religious practices on a weekly basis (Dumas and Bélanger, 1997). Unions of individuals who practice their religion are less likely to be dissolved (Turcotte and Bélanger, 1997).

In Canada, Bélanger and Dumas (1998) observed a slightly higher proportion of contraceptive use among couples in which the respondent reported never participating in religious practices (81%) than among those practising either occasionally or weekly (75%). On the other hand, the frequency of religious

practice has few effects on the choice of a contraceptive method, except that a smaller proportion of practising couples report using the pill or an IUD (18%) compared with others (28%), but this difference is entirely offset by a higher proportion of sterilized couples among those participating in religious practices on a weekly basis. The same offsetting phenomenon is observed in the United States. Among women using some method of contraception, sterilization is used by 48% of those practising a religion (or their spouse), compared with 35% of those not practising; 22% of those practising use a pharmaceutical method (the pill, an implant or injection) compared with 32% of those not practising.

Religious attendance is much higher in the United States than in Canada. Among women of childbearing age, the proportion of Americans (34%) who report practising their religion on a weekly basis is nearly double the rate for Canadians (18%). This one-to-two ratio is nearly constant for all age groups (Figure 11).

#### *- Job Insecurity Among the Young*

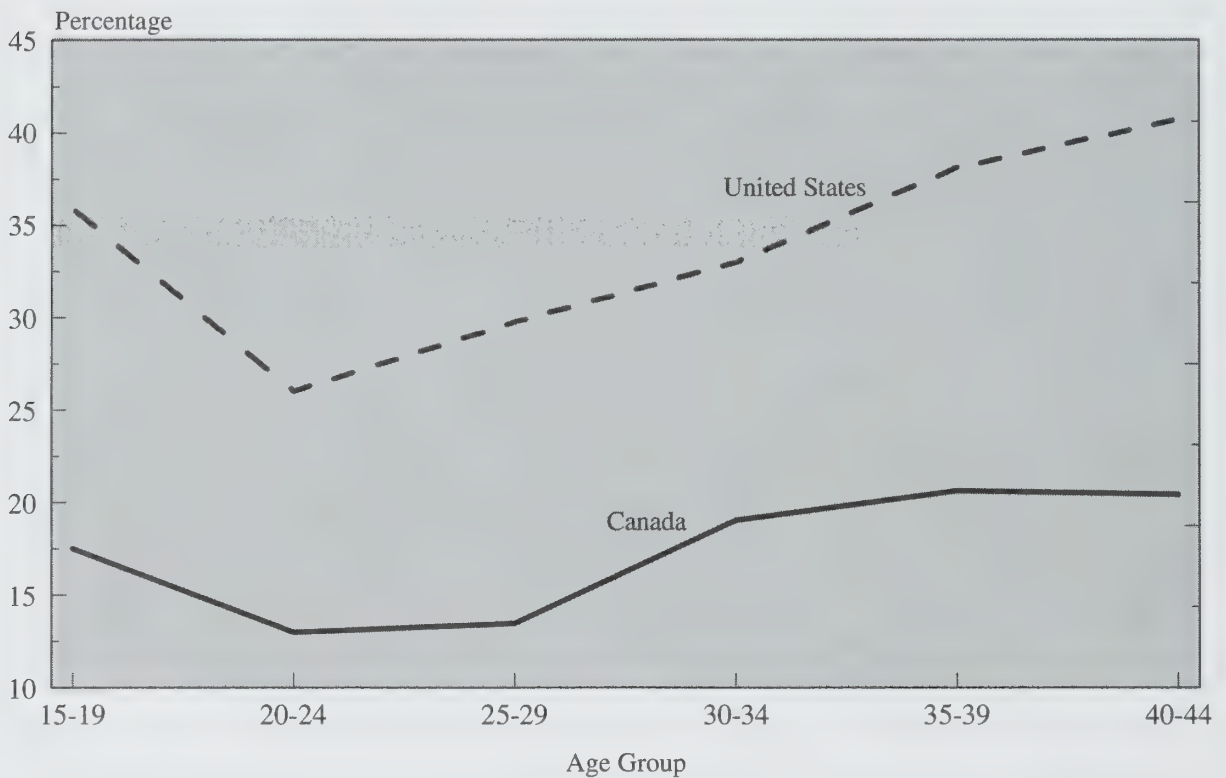
Over the past twenty years, access to the labour market was more difficult for the younger cohorts in Canada, for males and females alike. The unemployment rate is an indicator of job insecurity. The long-term responsibilities that come with having a child assume at least a minimum of financial (and emotional) security and a reasonable level of confidence in the future. Figure 12 compares the evolution of the unemployment rates of young men and young women aged 20-24 changed over time in the two countries between 1980 and 1998. The upward and downward movements in youth employment generally occur at the same time in the two countries, reflecting the strong integration of the two economies.

Against this backdrop of parallel patterns, a new phenomenon emerges: the growing gap between the Canadian and American rates. In the early 1980s, youth unemployment rates are similar in the two countries and indeed are sometimes lower in Canada, but since 1983, youth unemployment has consistently been higher in Canada than in the United States. Except in 1984 and 1985, when youth unemployment was 40% to 50% higher in Canada than in the United States, Canadian rates have been between 20% and 30% higher. The recession of the early 1990s appears to have had more serious consequences in Canada. Since 1991, the unemployment rate of young Canadians has consistently been 50% to 70% higher than that of young Americans.

One of the consequences of this job insecurity has been the relative lower income of young cohorts in comparison with those that preceded them. Indeed, the real earnings of young males in Canada were lower at the end of the 1990s than in the early 1980s. Between 1984 and 1999, the median net worth of young couples (aged 25 to 34) with children fell 30%. In 1999, 16% of these



**Figure 11. Proportion of Women who Report Practising their Religion Weekly by Age Group, Canada and United States, 1995**



**Sources:** Statistics Canada, General Social Survey 1995 and National Centre for Health Statistics, National Survey of Family Growth 1995.

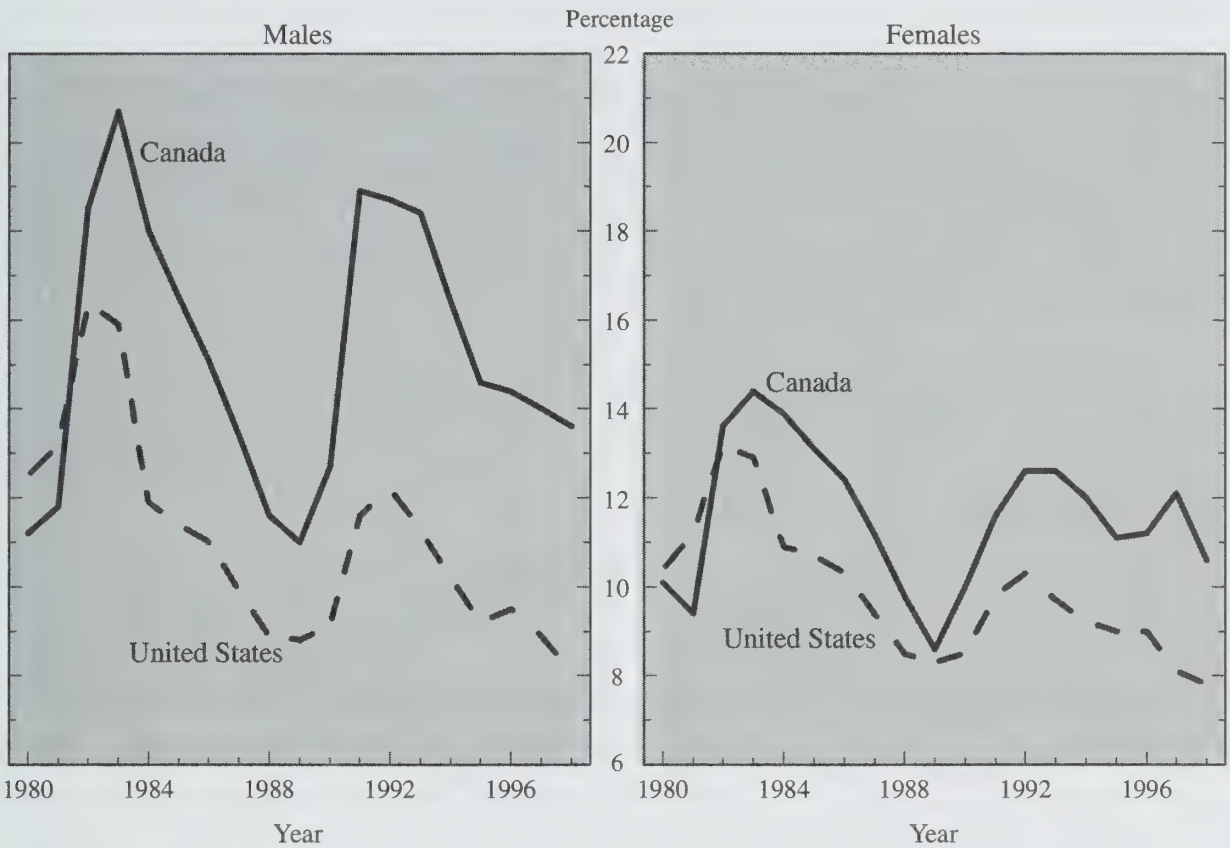
families had a nil or negative net worth, compared with 10% in 1984 (Morissette et al., 2002). Comparable data for the United States are not available, but a comparison of employment statistics suggests that the situation of American youth might be more favourable.

#### *- Policies on the Family*

In societies where public spending accounts for a large proportion of the gross national product, the social security system may exert negative pressure on the fertility level. In modern countries where health care, aid to the elderly and a minimum retirement income are guaranteed, some may consider it more advantageous (at least from an economic standpoint) not to have children, since they will be able to receive social protection when they are elderly and contribute minimally to the cost of children. In fact, according to Livi Bacci (2001), of all the factors that may be responsible for the low fertility observed in developed countries, the negative effect of the social security system deserves the greatest attention.

Neither Canada nor the United States has an explicit policy on the family, but in both countries a number of programs have an impact on the situation

**Figure 12. Unemployment Rate of Youths Aged 20-24 by Sex, Canada and United States, 1980-1998**



**Sources:** Statistics Canada, Labour Force Survey and Bureau of Labour Statistics.

of families. The wellbeing of Canadian families is directly or indirectly affected by various tax measures and social programs: tax credits for child care expenses; child tax benefits to less advantaged families, which replaced family allowances; free and universal health and hospitalization insurance; certain health care services provided to children in families below the poverty level; and social aid to the economically disadvantaged (Baker and Phipps, 1997).

As is currently the case in Canada, American programs providing for direct transfer to families focus on combating the poverty of children and other specific groups, such as abused or neglected children and disabled persons (Aid to Families with Dependent Children (AFDC), Supplemental Security Income (SSI), Food Stamps). They mainly target families belonging to visible minorities and single mothers. The social protection provided is minimal, often short-term and oriented toward integration into the labour market (Kamerman and Kahn, 1997: 409). There is no universal health insurance program, and most Americans have to look to the private sector. There is no family allowance or child tax benefit, and parental leave is minimal and unpaid. On the other hand, the American tax system provides various tax credits that favour wealthier taxpayers: exemptions for dependants (children or spouse), deductions

for mortgage interest payments, deductions for medical expenses beyond a certain level, and a child tax credit (Earned Income Tax Credit). While there is no family allowance program in the United States, several tax measures favour families with children (e.g., tax exemption for children and the deductibility of mortgage costs from taxable income). The benefits created by these measures might translate into financial aid that is comparable to or perhaps greater than what exists in other industrialized countries.

## Conclusion

*Canadian and American women desire the same number of children, yet the total fertility rates of the two countries differ by half a child.* The period rate indicates that on average, American women, unlike Canadian women, are achieving their birth number objectives .

This average probably reflects a balance between those who have more children than they want and those who have fewer. In fact, a sizable fraction—nearly a third—of the difference between the total fertility rates of the two countries may be explained by the high fertility of American teenage girls. No other industrialized country has such a high fertility rate for the 15-19 age group, and U.S. officials have long sought to reduce this phenomenon. Furthermore, the high fertility rate of some American ethno-racial groups—especially that of Spanish speakers, which stands at nearly three children per woman—is raising Americans' overall rate significantly. In Canada too there are fertility differences between ethno-racial groups, but they are less pronounced, and these groups account for a smaller proportion of the population. The effect on the national average is therefore smaller. It seems likely that the U.S. total rate might decline in the future if the fertility rate of teenage girls, many of whose births are unwanted, were to drop and if Hispanics' fertility rate were to follow that of the black minority and converge toward the lower rate of the white majority.

Fertility differences between the two countries are mainly observable among persons under thirty years of age. The fertility of American women aged 20 to 24 exceeds that of Canadian women of the same age by 75%; in the case of women aged 25 to 29, the difference is 15%. Favoured by earlier marriage, a greater propensity for legal marriage (which is more stable and more fertile than common-law union, an option that is more popular with Canadians), and easier entry into the labour market, in particular for young males, young American women aged 20 to 29 have more children than young Canadian women of the same age. While the fertility of women aged 30 and over has been rising for a quarter century in Canada, this increase does not offset the drop in the fertility of younger women.

While unwanted births are apparently more common in the United States, it nevertheless appears that in Canada there is a demand for more children



than Canadians are actually bringing into the world. In fact, when we compare the difference between the desired number of children and the actual number of children for women aged 25 to 29 in the different countries that participated in surveys of fertility and the family conducted between 1989 and 1996, the gap for Canada is one of the largest.<sup>5</sup>

The reasons why women do not manage to have the number of children that they want are generally grouped under two factors: involuntary infertility, and the other constraints that directly compete with the time and money that are required in order to raise children: career, standard of living, other family responsibilities, leisure activities, etc. A number of couples are infertile for physiological reasons, or because of disease-related complications, in particular certain sexually transmitted diseases. However, low fertility is probably on the rise more because of decisions to delay starting families, perhaps due to economic difficulties of young households, or the growing fragility of conjugal relationships, which are often dissolved through divorce or separation (or sometimes death) before the desired number of children are born. Couples may then tend to postpone having a child and delaying childbearing often results in a smaller number of children than desired, if only because of the decrease in fecundity that affects both men and women as they advance in years (Menken, 1985; de la Rochebrochard, 2001).

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<sup>5</sup> On this subject, see Figure 1 in the article of Livi-Bacci (2001) published in *Population and Development Review*, supplement to volume 27, page 285.

## BIBLIOGRAPHY

- Abma, J., A. Chandra, W. Mosher, and L. Peterson (1997). "Fertility, Family Planning and Women's Health : New Data from the 1995 National Survey of Family Growth", NCHS, *Vital Statistics*, 23 (19).
- Baker, M. and S. Phipps (1997). "Family Change and Family Policies : Canada" in Kamerman, S.B. and A.J. Kahn (Eds.), *Family Change and Fertility Politics in Great Britain, Canada, New Zealand, and the United States*. Clarendon Press, Oxford, 1997, 463 pages.
- Bélanger, A. (2000). *Réflexions sur l'évolution des composantes de la croissance démographique canadienne dans le contexte de l'examen triennal du Régime de pension du Canada*, actes du colloque sur les perspectives démographiques et économiques du Canada, Bureau de l'Actuaire en chef. Ottawa.
- Bongaarts, J. (1978). "A Framework for Analysing the Proximate Determinants of Fertility", *Population and Development Review*, 4 (1), pp. 105-132.
- Bongaarts, J. (1982). "The Fertility-Inhibiting Effects of the Intermediate Fertility Variables", *Studies in Family Planning*, 13 (6/7), pp. 179-189.
- Bongaarts, J. (2001). "Fertility and Reproductive Preferences in Post-Transitional Societies", in R. Bulatao and J. Casterline (Eds.), *Global Fertility Transition*, Population and Development Review, volume 27 (supplement), pp. 282-289.
- De la Rochebrochard, É. (2001). "Stérilité, fertilité : la part des hommes", *Population et sociétés*, number 371, September 2001, Paris.
- Davis, K and J. Blake (1956). "Social Structure and Fertility : An Analytical Framework", *Economic Development and Cultural Changes*, volume 4 (4), pp. 211-235.
- Donavan, P. (1999). "The "Illegitimacy Bonus" and State efforts to reduce Out-of-Wedlock Births", *Family Planning Perspectives*, volume 31 (2), pp. 94-97.
- Dumas, J. and A. Bélanger (1997). *Report on the Demographic Situation in Canada*, Statistics Canada, catalogue no. 91-209, Ottawa, 192 pages.
- Frejka, T. and W. Kingkade (2002). *US Fertility in International Comparison : An Exploration to Aid Projections*. Paper presented at Conference of the US Bureau of the Census, the Direction of Fertility in the United States, Alexandria, Virginia, October 2-3, 2001 (post-conference revision).

- Haveman, R.H., B. Wolfe and E. Peterson (1996). "Children of Early Childbearers as Young Adults" in R. Maynard (Ed.), *Kids Having Kids*, The Urban Institute Press, Washington, pp. 257-285.
- Henshaw (1998). "Unintended Pregnancy in the United States", *Family Planning Perspectives*, volume 30 (1), pp. 24-29 and 46.
- Henshaw (2001). "Teenage Abortion and Pregnancy Statistics by State, 1996", *Family Planning Perspectives*, volume 32 (6), pp. 272-280.
- Kamerman S.B. and A.J. Kahn (1997). "Family Change and Family Policies : United-States" in Kamerman, S.B. and A.J. Kahn (Éds.), *Family Change and Fertility Politics in Great Britain, Canada, New Zealand, and the United States*, Clarendon Press, Oxford, 1997, 463 pages.
- Jones, E.F., J.D. Darroch Forrest, S.K. Henshaw, J. Silverman and A. Torres (1989). *Pregnancy, Contraception, and Family Planning Services in Industrialized Countries*, Yale University Press, New Haven and London.
- Livi Bacci, M. (2001). "Comment : Desired Family Size and the Future Course of Fertility", in R. Bulatao and J. Casterline (Eds.), *Global Fertility Transition*, Population and Development Review, volume 27 (supplement), pp. 282-289.
- Maynard, R. (1996). *Kids Having Kids*, The Urban Institute Press, Washington, 361 pages.
- Menken, J. (1985). "Age and Fertility : How Late Can You Wait?", *Demography*, 22 (4), pp. 469-483.
- Morgan, S.P. (2000). "La fécondité aux États-Unis : Caractéristiques actuelles et tendances futures", in Fécondité en dessous du niveau de remplacement, *Bulletin démographique des Nations Unis*, special number 40-41, New York, pp. 401-420.
- Moore, K.A., D. Myers, D.R. Morrison, C. Nord, B. Brown and B. Edmonston (1993). "Age at Childbirth and Later Poverty", *Journal of Research on Adolescence*, 3 (4), pp. 393-422.
- Morissette, R., X. Zhang and M. Drolet (2002). **The Evolution of Wealth Inequality in Canada, 1984-1999**, Statistics Canada, catalogue no. 11F0019, number 187.
- Olausson, P.O., B. Haglund, G.R. Weitoft and S. Cnattingius (2001). "Teenage Childbearing and Long-Term Socioeconomic Consequences : A Case Study in Sweden", *Family Planning Perspectives*, volume 33 (2), pp. 70-74.



- Shoen, R., N.M. Astone, Y.J. Kim, C.A. Nathanson and J.M. Fields (1999). "Do Fertility Intentions Affect Fertility Behaviour?", *Journal of Marriage and the Family*, volume 61, pp. 790-799.
- Statistics Canada (2001). *Population Projections for Canada, Provinces and Territories, 2000-2026*, catalogue no. 91-520, Ottawa, 188 pages.
- Statistics Canada (2002). *Canada at a Glance*, 24 pages
- Turcotte, P. and A. Bélanger (1997). *The dynamics of formation and dissolution of first common-law unions in Canada*, Research paper published on the Statistics Canada Internet site.
- US Census Bureau (2000). *National Population Projections*, Detailed Files, Data file NP-D3: Annual Demographic Components of Change for the Resident Population by Race and Hispanic Origin, Middle Series, 1999-2100.
- Ventura, S.J., M.S. Mathews and B.E. Hamilton (2001). "Births to Teenagers in the United States, 1940-2000", *National Vital Statistics Reports*, volume 49 (10), National Centre for Health Statistics, Hyattsville, Maryland, 24 pages.
- Ventura, S.J. and C.A. Bachrach (2000). "Nonmarital Childbearing in the United States, 1940-2000", *National Vital Statistics Reports*, volume 48 (16), National Centre for Health Statistics, Hyattsville, Maryland, 39 pages.

# CHANGING DEMOGRAPHIC TRENDS AND THE USE OF HOME CARE SERVICES

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## *Summary*

*A long-term health problem can sometimes result in a loss of independence in carrying out the activities of everyday life. To make up for this loss, a person may be able to obtain assistance from an informal source (family, friend, neighbour), a formal source (paid employee, public or private agency, volunteer) or both sources at the same time (mixed source of assistance). The probability of using one or the other of these sources of assistance will depend in part on the person's family circle and existing formal resources.*

*Using data from the 1996 General Social Survey, this study examines the main socio-demographic factors associated with the source of assistance received by elderly persons living in a private household. According to the survey findings, the probability of receiving assistance from exclusively formal sources increases significantly among persons who have no surviving children. Also, compared to a person living alone, one living with a spouse under 75 years of age has a higher probability of using exclusively informal sources. Education level and health status also have a significant effect on the source of the assistance received. The study discusses the possible consequences of recent demographic changes on the use of formal sources in the future.*

## **Introduction**

In the last two decades, population aging has become a major concern in terms of the financial sustainability of social programs that are thought to be strongly tied to the age structure of a population, in particular public retirement plans and the health care system. This study focuses on the possible effects of some changing demographic trends on the use of home care services by first examining characteristics associated with the use of the different sources providing these services to the elderly population.

When projecting the future aging of a population, we concentrate mostly on changes in the proportion of older persons. However, if we only focus on

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the proportion of older persons, we restrict our analysis to the macro level, the age structure. Population aging also means important changes at the family level. By definition, the parents of baby-boomers tended to have many children. If they become disabled, either their spouse or their children are usually able to provide the assistance they need with their daily activities. Also by definition, baby-boomers tended to have brothers and sisters who might be in a position to provide them with assistance in old age. However, since baby-boomers tended to have few children of their own, their potential support network is limited. Finally, the children of baby-boomers, in turn, tend to have very few brothers and sisters in addition to having few children of their own. This demographic trend is particularly significant since 70% to 80% of the care provided to disabled elderly persons living in private households is delivered by informal caregivers (Hébert et al., 2001).

One can also look to other changes that could affect the availability of informal support. For example, women now participate more fully in the paid workforce and may not want to reduce their participation in order to provide daily assistance to aging relatives. That could reduce the amount of assistance provided by a child and increase the use of formal services by disabled elderly people. High divorce rates are another important social change that could affect the availability of informal support. Relationships that end in divorce may distance parents from their children and quite possibly reduce the likelihood of receiving assistance from these children in old age (Bulcroft and Bulcroft, 1991; Shapiro and Lambert, 1999).

The objective of this research is to identify factors associated with the use of different sources of assistance (informal, formal or both) among elderly persons receiving assistance for daily activities and living in private households. Although their numbers and proportions are not as high as they will be in the future, among today's older population there are some who have characteristics that may compare with tomorrow's elderly. From results observed to date, we could probably start to draw some preliminary conclusions on what could be, for example, the possible effect of the changing family structure associated with an aging population.

Although there are many studies about the use of health care services in general, few have looked at the use of formal and informal sources of assistance for home care services among elderly persons. The distinction among different types of health care services is important considering that the determinants of service utilization may be quite different from one type of service to another (Cafferata, 1987; Wan, 1987; Wolinsky and Johnson, 1991).

In the case of home care services, the difference from other kinds of health services is of particular importance. These services can be viewed as more social than medical and, therefore, may be provided by the informal support network. They are not primarily intended to cure an individual of a



chronic or acute condition, but to provide assistance with daily living. While looking at the types of services offered, Wister and Dystra (2000) found that formal and informal care providers did not offer the same types of care. Care needs that are routine, predictable and require some level of technical expertise may be better handled by formal helpers, while tasks that require proximity and flexibility may be better performed by informal helpers. Having informal sources of assistance readily available may significantly reduce the use of formal home care services (Greene, 1983; Soldo and Manton, 1985; Tennstedt et al., 1990; Wan, 1987). It is not surprising then to find that living arrangements have a significant effect on the use of the formal support network. For example, Grabbe et al. (1995) found that those living alone were more inclined to use formal services. Choi (1994) found that the childless elderly and the elderly living apart from their children were more likely to use social services than were elderly persons living with their children.

American studies have shown that age was one of the most significant factors associated with the use of formal home care services (Evashwick et al., 1984; Grabbe et al., 1995; Wan and Arling, 1983; Wan and Odell, 1981). Except for a study by Wan and Arling (1983), results showed that age was positively associated with the use of these services. Gender was shown to have a significant effect on the use of formal home care services, women being more inclined to use these services (Coulton and Frost, 1982; Evashwick et al., 1984; Grabbe et al., 1995; Wan and Arling, 1983). As expected, all of these studies found that functional limitation was the best predictor of the use of formal home care services.

Formal and informal services should not be seen as competitors or substitutes. Unless there is a total breakdown of the informal network or absence of such a network, formal services are usually provided in conjunction with informal services. In a review of the literature, Penning and Keating (2000) concluded that informal caregivers did not appear to reduce or stop involvement when formal caregiving was available. This was what Keating et al. (1997) called a “caring partnership”; we will refer to it as the receipt of “mixed services”.

As mentioned earlier, we will look at factors associated with the use of informal, formal or mixed sources providing assistance with everyday activities. Following the analysis of the results, we will discuss how decreasing fertility and the changing socio-demographic characteristics of tomorrow’s elderly population might affect future demand for formal home care services.

## **Data and Methods**

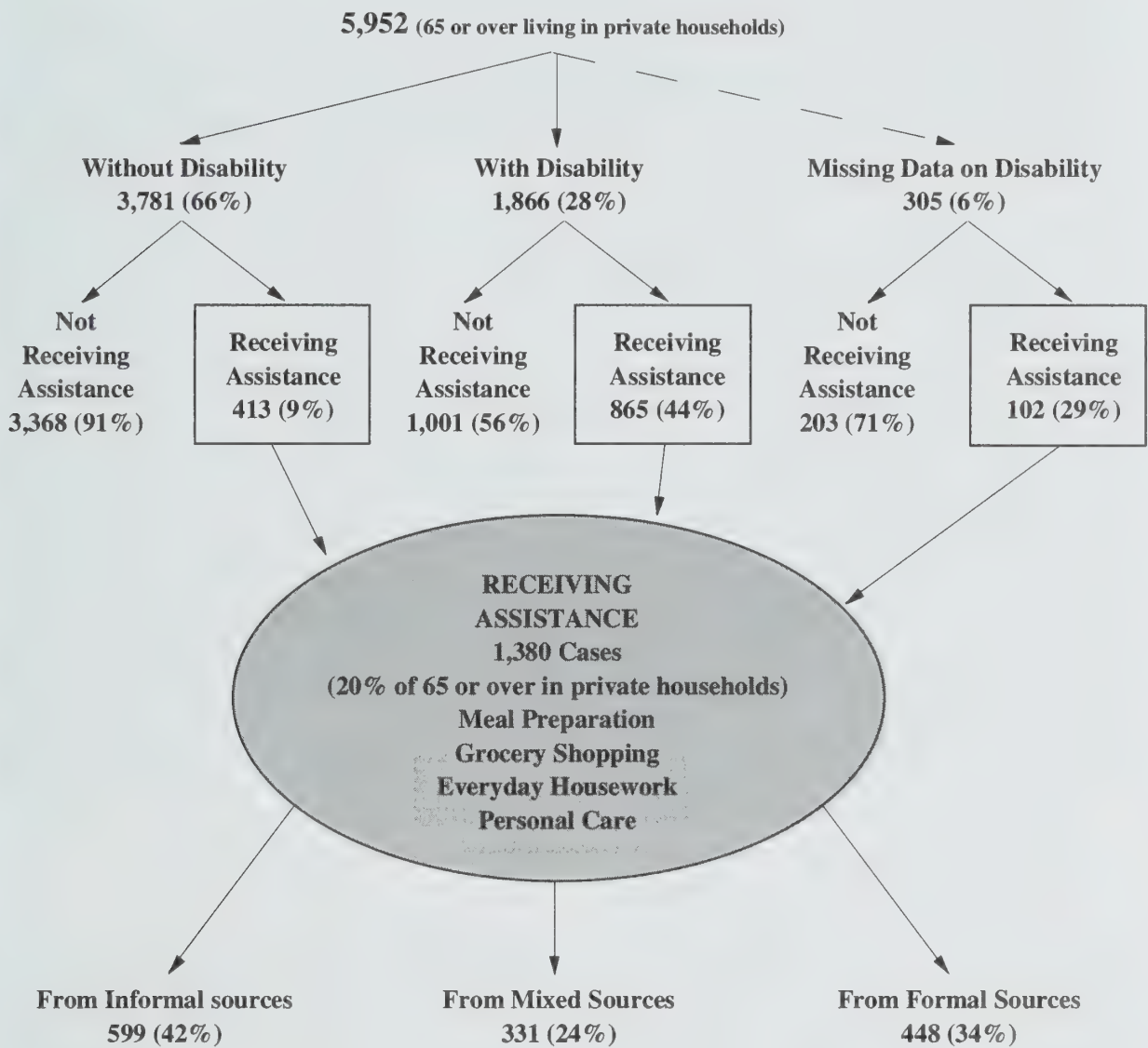
The data used for this study came from Statistics Canada’s 1996 General Social Survey (see Box “1996 General Social Survey—Social and Community Support” for details of this survey). Persons living in institutions were excluded from the survey, creating a bias in the results presented later. This issue will

## **1996 General Social Survey – Social and Community Support**

The data used for this study came from Statistics Canada's 1996 General Social Survey, Cycle 11: Social and Community Support. The target population for the survey was all Canadians 15 years of age or over living in private households. Full-time residents of institutions as well as residents of the Yukon and Northwest Territories were excluded. Data was collected using Computer Assisted Telephone Interviewing (CATI), systematically excluding households without telephones. Statistics Canada estimates that less than 2% of the target population resides in this type of household and that their characteristics are not different enough from those of the rest of the target population to have an impact on the estimates. Survey estimates were adjusted (weighted) to account for persons without telephones. In total, the sample consisted of 12,756 respondents. The response rate was 85.3%.

Two of the survey's objectives were to learn about the types of assistance Canadians provide or receive, as well as to gain a better understanding of the dynamics that link a person's social network and the assistance this person gives and/or receives. To this end, the questionnaire was designed to collect detailed information on the type of assistance provided or received for the following activities: meal preparation, house cleaning, laundry and sewing, house maintenance and outside work, grocery shopping, transportation, banking and bill paying, personal care (bathing, toileting, care of toenails/fingernails, brushing teeth, shampooing and hair care or dressing) as well as moral or emotional support. Since we were interested in the effect of changing socio-demographic characteristics on the use of home care services, we concentrated on four activities that are more commonly associated with those services: everyday housework, shopping for groceries, meal preparation and personal care. With the information collected in the survey, we were also able to identify the reasons behind the need for assistance: temporary or long term health or physical limitations, temporary difficult times, task sharing in the household, time constraints, etc. Here, we focused on assistance received due to a long-term health problem and the sources of the assistance received from formal sources (paid employees, government or non-government organizations and volunteers), informal sources (spouse, children, brothers or sisters, other members of the family, friends and neighbours) or a mixture of both formal and informal sources.

**Figure 1. Distribution of the Elderly Population Living in Private Households According to Disability, Physical Dependence and Source of Assistance, Canada, 1996**



**Note:** Percentages between parentheses are weighted. Numbers are unweighted. Among the 1,380 cases receiving assistance, two had missing data on sources of assistance.  
**Source:** Statistics Canada, General Social Survey, 1996.

be addressed in the discussion. However, our main concern was to identify factors associated with the use of formal and informal sources of assistance for services related to home care, i.e., services provided to those living in private households. For the purposes of this study, we examined information on people aged 65 or older who received assistance because of long term health problems for at least one of the following four activities: everyday housework, shopping for groceries, meal preparation or personal care. Figure 1 is weighted to represent the total Canadian population over age 65 living in private households, and shows that 28% could be identified as having a disability.



Disability is defined as having problems of vision, hearing, speech, mobility or dexterity that are not corrected by special equipment, or having problems in cognition. Out of those disabled persons, 44% received assistance with one of the four daily activities. It should also be noted that 8.6% of those without disability received assistance because of other long-term health problems. In total, *20% of the elderly population living in private households (1,380 respondents) received assistance with at least one of the activities considered in this study*<sup>1</sup>.

### **Dependent and Independent Variables**

The focus was on the source of assistance provided to persons aged 65 years or over residing in private households. Assistance can be provided by the informal or the formal network or a mix of both. By informal source of assistance, we mean help given by the spouse, children, brothers or sisters, other members of the family, friends and neighbours. A formal source of assistance is help provided by paid employees, government or non-government organizations and volunteers. Therefore, our dependent variable has three categories: informal sources of assistance only, formal sources of assistance only and a mix of both informal and formal sources of assistance. No distinction was made for the level of assistance, i.e., the number of hours those networks were actually giving to the respondents.

The independent variables included in the analysis were as follows: gender, living arrangement, age of spouse, number of surviving children, number of surviving siblings, level of schooling and a composite measure of functional health. Ideally, we would include in our analysis both the age of the respondent and the health status of their spouse. Since this latter information was not available in the survey, we instead included the age of the spouse. Because of the strong correlation between the respondents' age and the age of their spouse, the age of the respondent was excluded from the analysis. Also, since not all respondents lived with a spouse, not everyone could be assigned a value for the age of their spouse. For this reason, living arrangements were categorized as follow: living alone, living with a spouse under 75 years of age, living with a spouse 75 of age or over and living with others. Educational attainment was divided into four categories: elementary school or less, some or completed secondary school or technical school, some or completed community college or university and level of schooling not stated (missing). The latter category included almost 10% of all elderly respondents who received assistance so we opted to keep these individuals in the logistic regression as a separate group instead of dropping them from the analysis. Finally, health status was measured with a composite indicator, the Health Utility Index (HUI), based

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<sup>1</sup> Other elderly persons may have needed assistance but not received any. These individuals were excluded from our sub population. Therefore, the 20% figure underestimates the percentage of elderly persons living in private households who needed help with everyday activities.

### **Multinomial Logistic Regression Model**

The model used to derive estimated probabilities of receiving formal, informal or mixed assistance was a multinomial logistic regression. By using this type of regression procedure, the estimated probabilities of receiving a particular type of assistance were all computed at the same time. Thus, the model took into account competing risks since the probability of receiving formal sources of assistance, for example, should be linked to the probability of receiving informal care. The model was executed using SPSS 10.0 for Windows. We used weighted data for which the weights had been normalized by dividing the weight for each respondent by the average weight for the sample. This is necessary when regression procedures are used to correctly estimate the variance and the confidence intervals accounting for the stratification and clustering of the sample design. To ease the interpretation, results were presented using probabilities computed from the estimated parameters for each category of the dependent variable. Because of missing data on some of the variables used in the analysis, the studied sample was reduced from 1,380 to 1,319 cases.

on the Comprehensive Health Status Measurements System (CHSMS), which takes into account both the quantitative and qualitative aspects of health (Torrance et al., 1996). The HUI provides information on the functional health of an individual using the following attributes: vision, hearing, speech, mobility, dexterity, cognition, emotion, and pain and discomfort. This is a single numerical value ranging from 0 to 1 which takes into consideration all possible combinations of levels of the eight self-reported health attributes, using preference weight by health states based on previous research.

We hypothesized that characteristics related to the family structure of elderly people in need of assistance would be strongly associated with their use of specific sources of assistance. For example, those living alone with no surviving children and no surviving siblings would have a higher probability of using only formal sources of assistance (Martel and Légaré, 2001). Conversely, those with an extended family network would be able to rely more heavily on their informal network. In this regard, we expect that the shrinking family network would, all other things being equal, increase the demand for formal home care services. Even though those living with a spouse may rely more heavily on their partner to receive assistance, we expect that



those with older spouses would be more likely to use formal services or a mix of formal and informal sources of assistance. As for the association between health status and the use of specific sources of assistance, we hypothesized that those with a lower HUI—greater disability—will have a higher probability of using a combination of both networks, the informal network alone being insufficient to provide all the needed assistance. Even though more women use formal sources of assistance, gender should not be strongly associated with the use of specific sources of assistance after controlling for variables such as living arrangement and health status.

## Results

Before looking at the results specific to the older Canadian population in receipt of assistance for daily activities, we first compared persons who received assistance with those who did not receive any. As expected, Table 1 shows that, on average, the former were approximately five years older than the latter (77.4 years compared to 72.6 years). It also shows that the Health Utility Index (HUI) of those receiving assistance was 30% lower, which indicates that they were in far worse functional health. Considering the difference between the average ages of both groups, it is not surprising that we found a much higher percentage of women among those needing assistance. Also, those who received assistance were more likely to be living alone or with someone other than their spouse and to have no surviving siblings.

For the older population receiving assistance with daily activities, Table 2 shows, using bivariate analysis, the association between our independent variables and specific sources of assistance. ***42% received assistance only from informal sources, 34% from formal sources and the remaining 24% received help from a mix of informal and formal sources.***

Of all the categories examined, the highest proportion (64%) receiving assistance only from informal sources was among elderly persons living with others. Conversely, those with post-secondary schooling had the highest proportion (50%) of those receiving assistance from formal sources only. With respect to living arrangements, those living with a spouse aged 75 or over were quite similar to those living alone as far as using only formal sources of assistance. With respect to the number of surviving children, the proportion of elderly using strictly formal sources of assistance was much smaller among those with at least one surviving child. Although the proportion of elderly receiving assistance from informal sources only did not vary according to functional health status, the proportion of those using only formal sources of assistance was greater among those with an HUI greater than 0.66. Finally, men were more likely than women to receive assistance from informal sources only (47% versus 40%).

We used multinomial logistic regression to control for other variables and to better understand the effect of each independent variable on the use of



**Table 1. Characteristics of the Population Aged 65 or Over Living in Private Households According to Whether or Not They Receive Assistance in Performing Daily Activities, Canada, 1996**

	No Assistance	With Assistance	Total
Sex			
Males	45.8	33.0	43.3
Females	54.2	67.0	56.7
Age Group			
65-74	67.0	38.8	61.5
75-84	29.0	42.7	31.6
85 and Over	4.0	18.5	6.9
Average Age	72.6	77.4	73.5
Living Arrangements			
Alone	28.7	41.1	31.1
Living with Spouse	62.1	40.9	57.9
Living with Others	9.2	18.0	10.9
Number of Surviving Children			
0	11.3	13.8	11.8
1	10.7	13.4	11.3
2 +	77.9	72.8	76.9
Number of Surviving Siblings			
0	14.9	22.4	16.3
1	20.4	19.0	20.1
2 +	64.7	58.6	63.5
Education (highest level obtained)			
Elementary School or Less	22.7	30.6	24.1
Secondary School and Technical	64.0	57.5	62.8
Community College and University	13.3	11.9	13.0
Health Status			
Health Utility Index < 0.66 <sup>1</sup>	19.0	59.0	26.8
Health Utility Index ≥ 0.66	81.0	41.0	73.2
Health Utility Index (average)	0.86	0.66	0.83

<sup>1</sup> We have grouped together those with a health utility index less than 0.66 and those who did not answer all the questions needed to compute this index (316 cases). Bivariate analysis showed similar needs for assistance for these two groups.

**Source:** Statistics Canada, General Social Survey, 1996.

different sources of assistance among the older population. The model showed that *living arrangements, health status, educational attainment and number of surviving children were strongly associated with the use of specific sources of assistance* (Table 3). Gender, to a lesser extent, was also associated with the source of assistance used.

To better understand the effect of the independent variables on the use of specific sources of assistance, Figure 2 shows the results of the computed

**Table 2. Percent Distribution of the Population Aged 65 or Over Living in Private Households and Receiving Assistance in Performing Daily Activities According to the Source of Assistance, Canada, 1996**

	Informal Only	Formal Only	Mixed	Total
Total	42.1	34.1	23.8	100.0
Sex				
Males	47.4	34.3	18.3	100.0
Females	39.5	34.0	26.5	100.0
Living Arrangements				
Living Alone	29.3	40.9	29.8	100.0
Living with Spouse Aged Less than 75	51.8	33.3	14.9	100.0
Living with Spouse Aged 75 and Over	36.4	39.6	24.0 *	100.0
Living with Others	64.1	14.3 *	21.6 *	100.0
Number of Surviving Children				
0	31.3	46.6	22.2 *	100.0
1	41.9	30.4	27.7 *	100.0
2 +	44.6	32.6	22.8	100.0
Number of Surviving Siblings				
0	39.5	36.0	24.5	100.0
1	35.8	36.7	27.4	100.0
2 +	46.1	32.4	21.5	100.0
Education (highest level obtained)				
Elementary School or Less	54.9	23.9	21.2	100.0
Secondary School and Technical	40.2	37.7	22.1	100.0
Community College and University	28.2 *	50.0	21.8 *	100.0
Health Status				
Health Utility Index < 0.66	43.4	26.4	30.2	100.0
Health Utility Index ≥ 0.66	40.2	45.2	14.6	100.0

\* High sampling variation associated with the estimate and should be interpreted with caution.

**Source:** Statistics Canada, General Social Survey, 1996.

probabilities using the  $\beta$  coefficients from our equation<sup>2</sup>. Probabilities were computed for the following variables: gender, health status, level of schooling, living arrangement and number of surviving children. Note that these probabilities are conditional given that the population under study is receiving assistance

<sup>2</sup> The probabilities were computed using a coding procedure called "effect coding". For a specific set of characteristics, this coding procedure will produce the same probabilities as those resulting from the more traditional "dummy coding". When using effect coding, we control for the average effect of the independent variables instead of controlling for a series of reference categories. Therefore, the probabilities presented in Figure 2 are for a specific category of an independent variable, controlling for the average effect of all other independent variables. We have excluded the number of surviving siblings from Figure 2 since the effect of this variable was not significant.

### Interpretation of Odds Ratios

Table 3 presents the odds ratios ( $e^b$ ) and the corresponding 95% confidence intervals (CI) for each category of the independent variables for informal versus mixed, formal versus mixed, and formal versus informal sources of assistance. For a specific category of an independent variable, when the odds ratio was greater than 1, there was a greater chance of using the source of assistance that was being compared, in relation to the reference category for that variable. For example, those with no surviving children, compared with those with at least two surviving children, were twice as likely to use formal sources only rather than using informal sources only. When the ratio was less than 1, the interpretation was reversed. For example, those living with others, compared with those living alone, had half (0.52) the chance of using the formal sources only rather than using a mix of informal and formal sources. When the 95% CI included the value 1, there was no significant difference between the reference category and the one being compared. The interpretation of the odds ratios in a multinomial logistic regression is not particularly straightforward because there are more than two outcomes for the dependent variable. To better understand the results of this model, we computed the probabilities associated with specific characteristics among our independent variables (Figure 2).

because of a long term health problem. The probabilities then only apply to those who are receiving some assistance for the activities considered in the analysis.

As shown in Figure 2, the effect of gender, although significant, was rather small. Elderly men and women receiving assistance had similar probabilities of using strictly formal sources of assistance. However, *men had a slightly greater probability of using only informal sources (0.42 versus 0.37)*. This may be a result of the kinds of daily activities examined. Because of the way housework is shared between men and women, especially among today's elderly population, the probability of being assisted by a spouse—a major component of the informal network—is greater for men than for women.

The relationship of functional health status to sources of assistance was interesting. A higher HUI, although it did not increase significantly the probability of using only informal sources, was associated with a greater probability of receiving assistance only from formal sources. The greater reliance on the latter was probably related to the fact that almost one third (31%) of those



**Table 3. Odds Ratios Relating the Source of Assistance Received Because of a Long Term Health Problem According to Certain Characteristics of the Elderly Population, Canada, 1996**

	Formal vs Informal		Informal vs Mixed		Formal vs Mixed	
	Odds Ratio	Confidence Interval of 95%	Odds Ratio	Confidence Interval of 95%	Odds Ratio	Confidence Interval of 95%
Sex						
Females	1.07	0.77 - 1.49	<b>0.62</b>	0.42 - 0.91	<b>0.66</b>	0.44 - 0.99
Males (reference)	1.00	... ..	1.00	... ..	1.00	... ..
Living Arrangements						
Living with Others	<b>0.18</b>	0.11 - 0.29	<b>2.92</b>	1.89 - 4.49	<b>0.52</b>	0.30 - 0.89
Living with Spouse Aged < 75	<b>0.55</b>	0.37 - 0.82	<b>3.10</b>	1.90 - 5.08	<b>1.71</b>	1.03 - 2.84
Living with Spouse Aged ≥ 75	0.79	0.52 - 1.20	1.49	0.94 - 2.38	1.18	0.75 - 1.87
Living Alone (reference)	1.00	... ..	1.00	... ..	1.00	... ..
Number of Surviving Children						
0	<b>2.05</b>	1.33 - 3.16	0.87	0.53 - 1.44	<b>1.78</b>	1.10 - 2.88
1	0.98	0.63 - 1.53	0.99	0.62 - 1.57	0.97	0.59 - 1.58
2 + (reference)	1.00	... ..	1.00	... ..	1.00	... ..
Number of Surviving Siblings						
0	1.17	0.82 - 1.69	0.91	0.61 - 1.35	1.06	0.70 - 1.61
1	1.41	0.96 - 2.09	<b>0.60</b>	0.40 - 0.91	0.85	0.55 - 1.30
2 + (reference)	1.00	... ..	1.00	... ..	1.00	... ..
Education						
No Response	0.57	0.28 - 1.17	0.74	0.35 - 1.55	<b>0.42</b>	0.20 - 0.86
Elementary School or Less	<b>0.28</b>	0.17 - 0.47	<b>1.98</b>	1.09 - 3.62	0.56	0.31 - 1.00
Secondary School and Technical	<b>0.47</b>	0.29 - 0.76	1.58	0.90 - 2.80	0.75	0.44 - 1.27
Post-Secondary (reference)	1.00	... ..	1.00	... ..	1.00	... ..
Health Status						
Health Utility Index < 0.66	<b>0.57</b>	0.43 - 0.77	<b>0.51</b>	0.36 - 0.72	<b>0.29</b>	0.21 - 0.42
Health Utility Index ≥ 0.66 (reference)	1.00	... ..	1.00	... ..	1.00	... ..

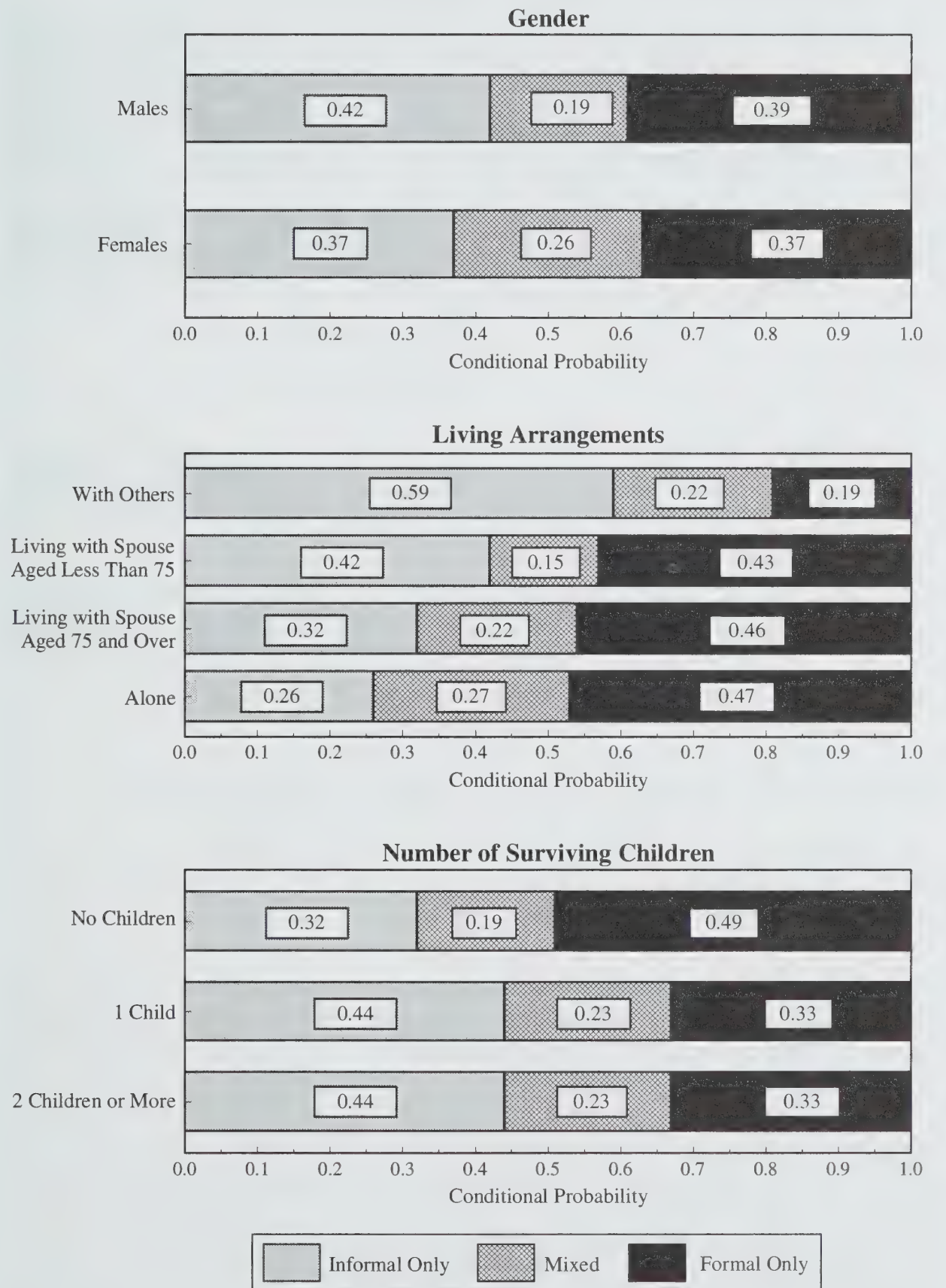
**Note:** Numbers in bold are significant ( $p \leq .05$ )

**Source:** Statistics Canada, General Social Survey, 1996.

with a higher HUI received assistance strictly for housework, compared to about one sixth (16%) of those with an HUI below 0.66. It may very well be that these individuals were paying for housekeeping services, which would have a significant effect on the probability of receiving only formal assistance among those with a higher HUI.

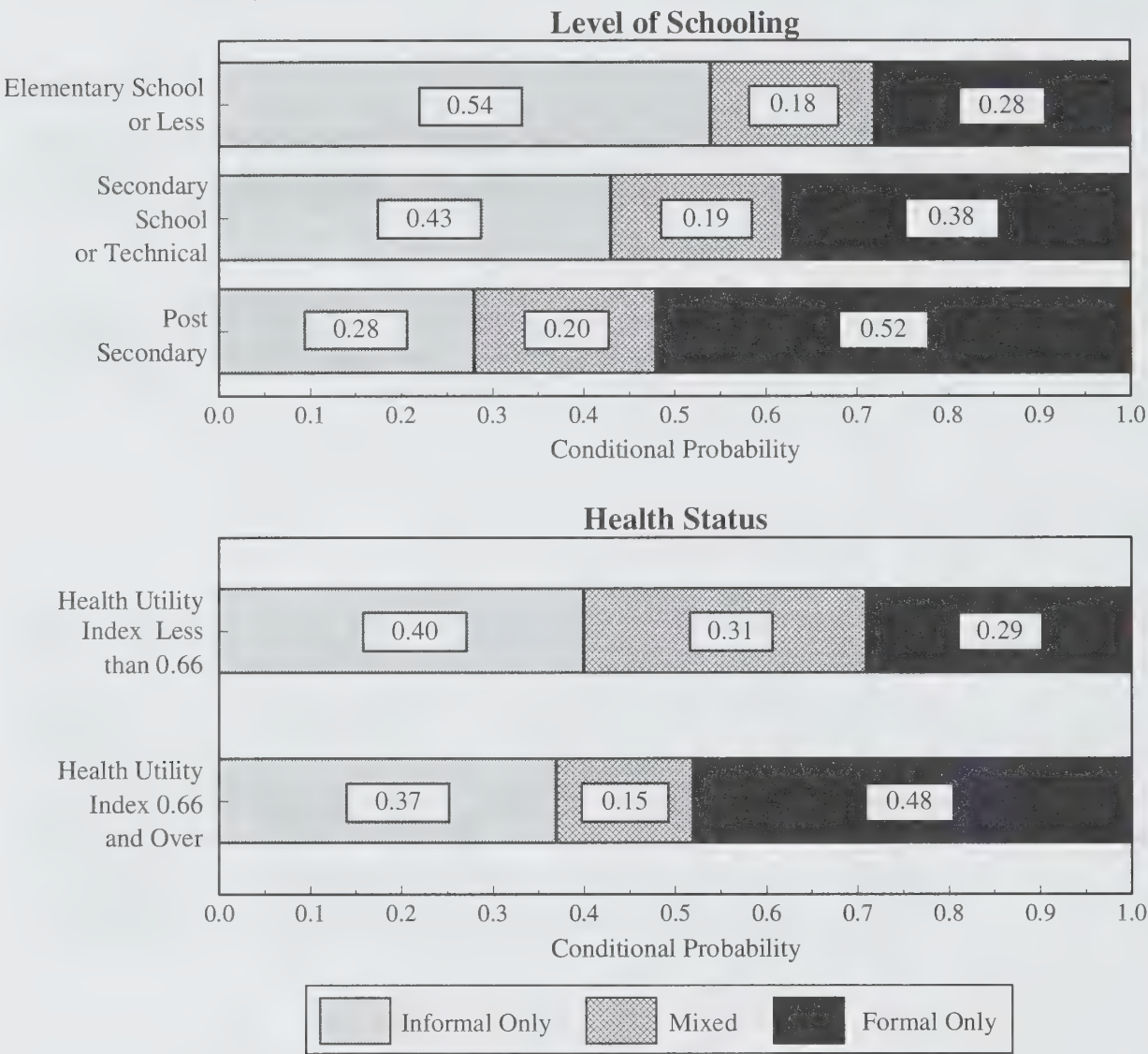
As can be seen in Figure 2, *those living with others had the greatest probability (0.59) of using only informal sources*. Although this result may not be surprising considering that living with others can be seen as a strategy for easier access to informal sources of assistance, it is still interesting to see that the majority of elderly persons receiving assistance for daily activities were not using any formal sources of assistance at all. The other three categories showed about the same probabilities of using formal sources only. However, although the probability of using informal sources, either strictly or in conjunction with formal sources, was quite similar among the three groups, the probability of using only informal sources was significantly different. The results show

**Figure 2. Conditional Probabilities<sup>1</sup> of Receiving Assistance from Informal, Formal or Mixed Sources According to Certain Characteristics of the Elderly Population Who Received Assistance Because of a Long Term Health Problem, Canada, 1996 - continued**



**Source:** See end of figure.

**Figure 2. Conditional Probabilities<sup>1</sup> of Receiving Assistance from Informal, Formal or Mixed Sources According to Certain Characteristics of the Elderly Population Who Received Assistance Because of a Long Term Health Problem, Canada, 1996 - end**



<sup>1</sup> It is a conditional probability since everyone in this analysis received assistance.  
**Source:** Statistics Canada, General Social Survey, 1996.

that *the younger the spouse, the greater the probability of using only informal sources of assistance. When the spouse's age was 75 or over, the probability of using only informal sources of assistance became similar to that of those living alone.*

Having at least one surviving child had a significant effect on the probability of using specific sources of assistance (Figure 2). We note that the probability of using only formal sources of assistance (0.33) was the same for those having only one child as for those with at least two children but much higher (0.49) for those with no children. *The probability of using only informal sources of assistance was 0.32 for those with no surviving children compared to 0.44 for those with at least one surviving child.* The combined probabilities



of receiving assistance from informal sources or a mix of formal and informal sources was 0.67 for those with at least one surviving child, compared with 0.51 for those with no surviving children.

Finally, Figure 2 shows how strong the relationship was between the use of formal sources of assistance and educational attainment. Among elderly persons receiving assistance for daily activities, *there was a strong positive relationship between the level of schooling and the probability of using only formal sources*. This probability increased from 0.28 for those with less than secondary schooling to 0.52 for those with post-secondary education. This increase was paralleled by an equally important drop in the probability of using strictly informal sources of assistance. *The probability of receiving help fully or partly from informal sources was 0.72 for those with a lower level of schooling compared with less than one out of two (0.47) for those with post-secondary schooling*.

## Discussion and Conclusions

Contrary to most previous studies, we restricted our analysis to those older individuals who received assistance. Many studies have looked at factors associated with the use of formal services among the older population in general. Of course, health then became the main predictor of the use of formal services. By contrast, we restricted our analysis to older persons who received assistance in daily activities because of long-term health problems since we were interested in factors associated with the use of different sources of assistance once a need had been expressed and partially or totally satisfied. Since our interest in this research was driven by the changing nature and extent of the informal network, the discussion will emphasise the results pertaining to the effects of living arrangements and the number of surviving children on the source of assistance.

Before proceeding with the discussion, certain limitations should be acknowledged when trying to interpret the results of this study. First, the study population was limited to those living in private households and receiving assistance. Although we were looking at home care services, it is certain that if formal care services were not provided in institutional settings, the need for home care services (provided by both formal and informal sources) would be greatly increased. Also, the exclusion of institutionalized individuals in the GSS created a selection bias in the sample we were studying since it selectively removed those in worse health and possibly without access to informal care. It can lead to an overestimate of the effects of some independent variables while underestimating the effects of others.

Secondly, home care policies in Canada fall under provincial jurisdiction. Each province has its own policy, which affects formal and informal service use. The results for Canada as a whole can hide important provincial differences. Also, although we were able to control for the number of surviving children

and siblings, the data set did not contain any information about the health status of these members of the informal network. This information could have a substantial impact on the use of specific sources of assistance, specifically where the oldest-old are concerned. Often, members of this group have survived the majority of their siblings. Moreover, even if other family members are still alive, they may themselves be restricted by functional limitations and unable to provide any assistance. Also, we have no information about the place of residence of the surviving children. Being assisted by children does not require simply having surviving children, but, among other factors, it also requires that these children live close by. Similarly, we had no information about the health status of the spouse. Although we used the spouse's age as a proxy for the latter, we were not capturing the full effect it could have on the source of assistance provided.

Thirdly, working with cross sectional data also caused some problems. Longitudinal data would certainly add important information towards a better understanding of the dynamic process that exists between the informal and formal networks, especially when the demand for services increases or when important changes affect the nature and extent of the informal network as people age. Finally, when looking at the computed probabilities, we should pay more attention to the relative value of a probability compared to another rather than the exact value of this probability. Some probabilities are computed based on small numbers of individuals and the variance could be significant.

The multinomial logistic regression showed that all of the independent variables, except for the number of surviving siblings, were significantly associated with the source of assistance. It is clear from this study that demographic trends will have an impact on the use of formal home care services in the future. A decline in fertility affects the extent and the nature of the immediate social environment. The baby-boomer generations will reach old age with fewer children (see Figure 3 in Part I of the Report) to provide them with assistance, if needed. These generations have a completed fertility rate of less than two children per woman. However, our results showed that having just one surviving child instead of two or more did not affect the probabilities of using formal or informal sources of assistance for daily activities for persons receiving assistance. It was less the number of children than having at least one child that affected the probability of receiving formal assistance. Before concluding that the decrease in fertility below the replacement level—less than 2.1 children per woman—necessarily implies an increase in the use of formal home care services, we should look at the trend in the probability of having at least one child.

Table 4 shows that even in 1991, after a period of rapid decline in fertility, at least eight out of ten women born during the first half of the baby-boom (1947 -1956) gave birth to at least one child. The major cause of the decrease in the total fertility rate for these generations was the sharp decline in the



proportion of women having at least three children (Statistics Canada, 1998). This decline in itself should not have a major impact on their use of formal home care services. However, it will mean that such assistance must be provided by a shrinking informal network, tending to increase the burden of those providing the assistance. Also, we were not trying to study how effectively the assistance received responded to the needs of the elderly receiving assistance. Those with a smaller informal network may also have a higher probability of having unmet needs. If so, it could mean that a shrinking informal network in the future would leave more disabled elderly without needed assistance. Finally, the results for those having just one surviving child emphasize the effect that the migration of children could have on the assistance they can provide to their aging parents. Recent trends regarding the migration of children should be studied to see how it could affect the use of formal home care services and institutionalization in the future.

A decline in fertility also means that younger generations will enter old age with fewer surviving siblings. However, our results show that this component of the informal network had no significant effect on the source of assistance received by elderly Canadians living in private households. The fact that today's youngest generations will enter old age with fewer siblings may not affect the use of formal home care services.

The results also show the importance of living arrangements on the conditional probability of using formal sources of assistance. Trying to determine trends in the living arrangement of tomorrow's elderly population implies making hypotheses about trends regarding divorce, remarriage, the age gap between spouses and the life expectancies of men and women. The increase in divorce rates implies that a greater proportion of the baby-boom generations will enter old age as divorced individuals (Martel and Carrière, 1999) who may be living alone. On the other hand, this will depend on the rate of remarriage or common law union among divorced individuals. Finally, if the gap between the life expectancy of men and women continues to diminish, it would increase the probability of living with a partner in old age, especially for women. All other things being equal, it would tend to reduce the use of formal home care services.

Of course, factors other than those related to demographic trends will affect the future use of formal home care services. For example, the level of

**Table 4. Probability for a Woman to Have No Children, by Cohort, Canada, 1991**

Cohorts	Probability (per 1,000)
1927-1931	134
1932-1936	120
1937-1941	121
1942-1946	137
1947-1951	159
1952-1956	198

Source: Statistics Canada, Census of Canada 1991, catalogue no. 93-321, table 2.



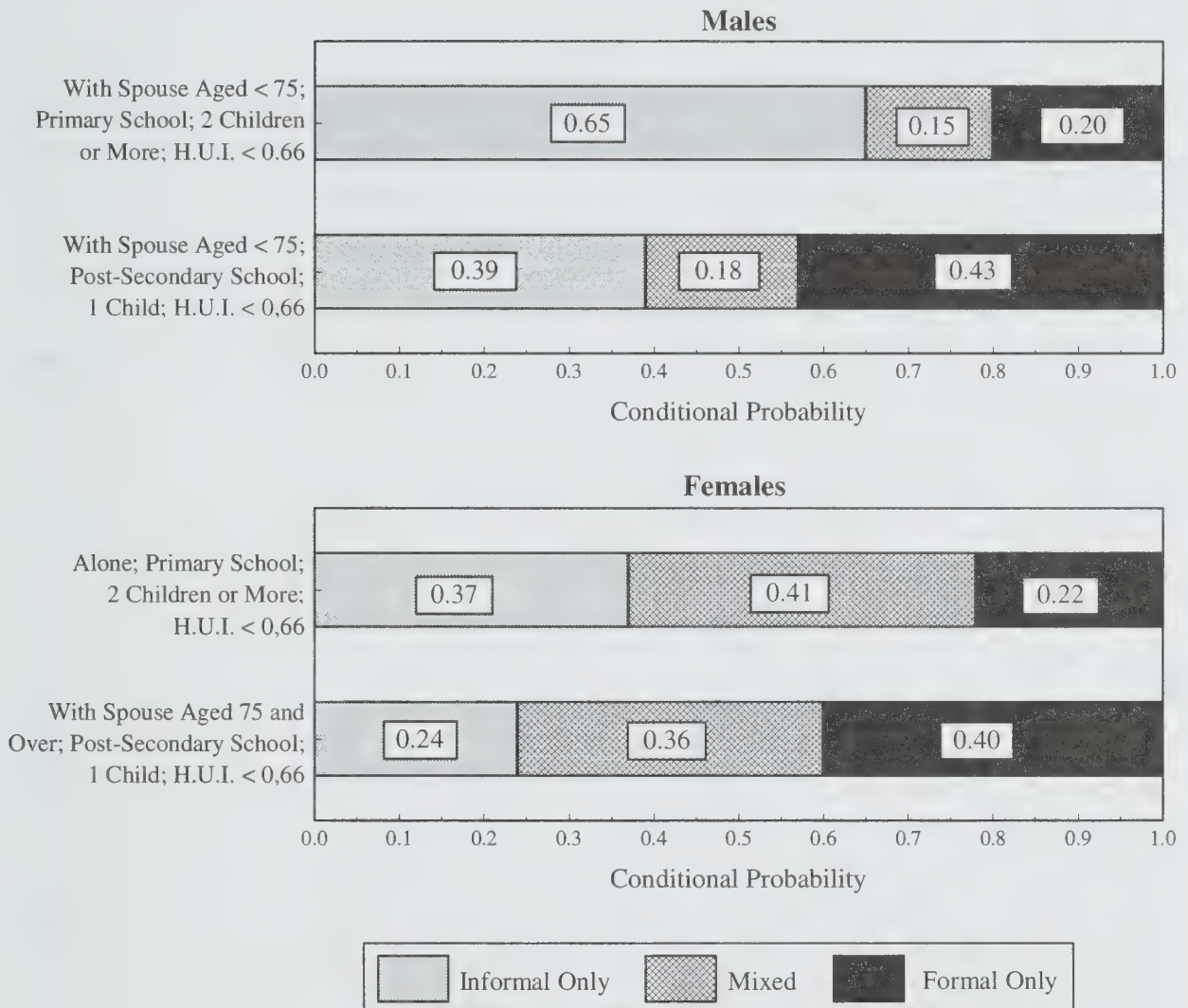
schooling of the population has increased considerably over the last 30 years. Data from the 1996 census show that among those born between 1912 and 1931 (aged 65-84 in 1996), 36% of both men and women had less than a grade 9 education; by far the most common schooling level among these generations. Conversely, the 1996 census shows that this proportion was only 5% for generations born between 1947 and 1966 (those aged 30-49 in 1996). More than 28% of the latter had some university education, making that the most common schooling level. In fact, 57% of men and women of those generations had at least some post-secondary education. This major improvement in the schooling level of tomorrow's elderly population could have an important effect on the use of formal home care services for those in need of assistance. We saw that higher educational levels were associated with a greater probability of using formal sources of assistance, assuming that any assistance is received. This could very well be interpreted as a cultural rather than strictly educational effect. Within the cohorts under study, those with a lower level of schooling may be less knowledgeable about the services available or more apprehensive about having the formal network involved in the provision of their home care needs. Those with a higher level of schooling may be more inclined to accept this type of assistance or more assertive about making their needs known to agencies providing home care services. It may also be that they set a high priority on independence from their children and will be more likely to ask or pay for formal services<sup>3</sup>. With the increasing level of schooling in the population, we may be likely to see, all other things being equal, an increase in the use of formal home care services.

For a better understanding of what could be the effect of changing demographic characteristics on the use of home care services, Figure 3 shows the conditional probabilities of using informal, formal and mixed networks according to two different profiles for both men and women. The top part of the Figure shows the probabilities for males and females who can be described as more representative of today's older population. It shows that, for those who received assistance, there was a 0.65 probability for a male in poor health (HUI less than 0.66) living with a spouse under the age of 75, with less than secondary school and at least two surviving children, of receiving assistance strictly from informal sources. In fact, there were eight chances out of ten that informal sources would be involved in the provision of home care services. Conversely, the conditional probability of having at least partial assistance

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<sup>3</sup> One could assume that higher education necessarily means higher income, therefore a greater purchasing power that includes purchasing home care services from private agencies. This hypothesis was not supported by our data. A logistic model was used adding a proxy for low income—receiving the Guaranteed Income Supplement (GIS) or not—but was not found to be statistically significant. However, data on income can be questionable because of the high rate of non response and it would be hazardous to reject the hypothesis of an income effect picked up through the education variable. Also, those receiving GIS may have been more likely to be in institutions.

**Figure 3. Conditional Probabilities of Receiving Assistance from Informal, Formal or Mixed Sources for Certain Profiles of Males and Females Aged 65 or Over Who Received Assistance Because of a Long Term Health Problem, Canada, 1996**



**Source:** Statistics Canada, General Social Survey, 1996.

from formal sources was 0.35 (0.15 plus 0.20). For a typical elderly female—living alone, less than secondary schooling and at least two surviving children—receiving home care services, the probability of receiving only informal assistance was 0.37. The conditional probability of having the formal network involved was much greater than for an elderly male: 0.63 compared to 0.35.

For both males and females, we created an additional scenario that could better represent the profile of tomorrow’s elderly population. For men, we increased the level of schooling to post-secondary level, while lowering the number of surviving children to only one. From the results shown earlier, we know that the effect of having one surviving child instead of two or more had no effect on the probability of using one source of assistance over another



for those receiving assistance. The difference in the results shown in Figure 3 then reflects only the change in the schooling level. This effect was particularly important for the use of formal sources; for men receiving assistance it doubled the probability of using strictly formal sources from 0.20 to 0.43. For women, in addition to increasing the level of schooling and lowering the number of surviving children, we changed their profile from living alone to living with a spouse aged 75 years or over. That profile reflected the continuing trend toward the narrowing of the gap in the life expectancy between males and females. Similarly to what we observed for men, these changes would result in an increase from 0.22 to 0.40 in the conditional probability of using strictly formal sources of assistance.

These scenarios indicate that there are factors, aside from the growing number of oldest-old in the future, that will tend to increase the pressure on formal home care services. However, other factors might help to ease some of this increasing pressure. When looking at the results of this study, we have to remember that we are focusing on the population living in private households and receiving assistance because of long-term health problems. Tomorrow's older population will have socio-economic and demographic characteristics that may very well increase the use of home care services, but only when a need for assistance is present. While it is true that, all other things being equal, an improvement in the level of schooling may lead to an increase in the use of formal services, it is also possible that this improvement will have a positive effect on the health status of the older population. In this case, a higher level of schooling would reduce the relative number of those in poor functional health needing home care services in the first place, thereby reducing the probability of receiving assistance. Moreover, if healthy life expectancy increased faster than life expectancy, it would also reduce the proportion of years in which an elderly person needed home care services. Finally, our results show that having a spouse under 75 years of age is associated with a greater conditional probability of using informal sources of assistance only. When interpreting the spouse's age as a proxy for his/her health status, this result would indicate that living with a spouse increases the conditional probability of receiving informal assistance mainly for those with a healthy spouse. Improvements in the health status of the elderly population would also mean that a spouse would be in better health to provide assistance to his/her partner if needed. ***Promoting population health could go a long way towards reducing the pressure on formal home care services in the context of population aging.***

Policies regarding institutionalization of the disabled elderly population will also play an important factor in the demand for home care services. These policies directly affect the use of formal home care services. Limiting entry into institutions, all other things being equal, increases the demand for formal and informal home care services. Conversely, higher rates of institutionalization



will tend to lower this demand. The effects of these policies on the overall social costs related to dependent elderly persons with needs for assistance with daily activities is far from clear.

This study demonstrates the need for a better understanding of the factors underlying the use of different sources of home care services. When considering only the changing nature and extent of the family network, the results point to a relative increase in the use of formal home care services in the future among those receiving assistance. This increasing use will not be solely the result of demographic pressures. As we saw, *the changing socio-demographic characteristics of the elderly population, along with the changing social context (migration of children, divorce, remarriage, etc.), will also have important effects on the nature, formal or informal, of services received.*

## ACKNOWLEDGEMENTS

The authors are grateful to Leroy Stone, Alain Bélanger and anonymous reviewers who provided valuable comments on an earlier version of this paper. We also wish to thank Sylvie Lafrenière who assisted us during the latter part of this study.

## BIBLIOGRAPHY

- Bulcroft, K.A. & R.A. Bulcroft (1991). "The Timing of Divorce: Effects on Parent-Child Relationships in Later Life", *Research on Aging*, 13 (2), pp. 226-243.
- Cafferata, G. L. (1987). "Marital Status, Living Arrangement and the Use of Health Services by Elderly Persons", *Journal of Gerontology, Social Sciences*, 42 (6), pp. 613-618.
- Choi, N.G. (1994). "Patterns and Determinants of Social Service Utilization: Comparison of the Childless Elderly and Elderly Parents Living With or Apart From Their Children", *The Gerontologist*, 34 (3), pp. 353-362.
- Coulton, C. & A.K. Frost (1982). "Use of Social and Health Services by the Elderly", *Journal of Health and Social Behavior*, 23, pp. 330-339.
- Evashwick, C., G. Rowe, P. Diehr & L. Branch (1984). "Factors Explaining the Use of Health Care Services by the Elderly", *Health Services Research*, 19 (3), pp. 357-382.
- Grabbe, L. et al. (1995). "Functional Status and The Use of Home Care in the Year Before Death", *Journal of Aging and Health*, 7 (3), pp. 339-364.
- Greene, V.L. (1983). "Substitution Between Formally and Informally Provided Care for the Impaired Elderly in the Community", *Medical Care*, 21 (6), pp. 609-619.
- Hébert, R., N. Dubuc, M. Buteau, J. Desrosiers, G. Bravo, L. Trottier, C. St-Hillaire & C. Roy (2001). "Resources and Costs Associated With Disabilities of Elderly People Living at Home and in Institutions", *Canadian Journal of Aging/La revue canadienne du vieillissement*, 20 (1), pp. 1-21.
- Keating, N., J. Fast, I. Connidis, M. Penning & J. Keefe (1997). "Bridging Policy and Research in Eldercare", *Canadian Journal on Aging / La revue canadienne du vieillissement*, (suppl.), pp. 22-41.
- Martel, L. & Y. Carrière (1999). "Some Evidence of the Effect of Divorce on Later Life: An International Comparison", Population Activities Unit, Economic Commission for Europe, United Nations, Sion, December.
- Martel, L. & J. Légaré (2001). "Avec ou sans famille proche à la vieillesse: une description du réseau de soutien informel des personnes âgées selon la présence du conjoint et des enfants", *Cahiers québécois de démographie*, 30 (1), pp. 89-114.

- Penning, M. & N. Keating (2000). "Self, Informal and Formal Care: Partnerships in Community-Based and Residential Long-Term Care Settings", *Canadian Journal on Aging/La revue canadienne du vieillissement*, 19 (suppl.1), pp. 75-100.
- Shapiro, A. & J. D. Lambert (1999). "Longitudinal Effects of Divorce on the Quality of the Parent-Child Relationship and on Fathers' Psychological Well-Being", *Journal of Marriage and the Family*, 61, pp. 397-408.
- Soldo, B. J. & K. G. Manton (1985). "Health Status and Service Needs of the Oldest Old: Current Patterns and Future Trends", *Health and Society*, 63 (2), pp. 286-319.
- Statistics Canada (1998). *Report on the Demographic Situation in Canada 1997*, catalogue no. 91-209-XPF, Ottawa, Ministre de l'Industrie, 193 pages.
- Tennstedt, S.L., L.M. Sullivan, J.B. McKinlay and R.B. D'Agostino (1990). "How Important Is Functional Status as a Predictor of Service Use by Older People?", *Journal of Aging and Health*, 2 (4), pp. 439-461.
- Torrance G.W., D.H. Feeny, W.J. Furlong, R.D. Barr, Y. Zhang & Q. Wang (1996). "Multiattribute Utility Function for a Comprehensive Health Status Classification System. Health Utilities Index Mark 2", *Medical Care*, 34, pp. 702-722.
- Wan, T.T.H. (1987). "Functionally Disabled Elderly: Health Status, Social Support and Use of Health Services", *Research on Aging*, 9 (1), pp. 61-78.
- Wan, T.T.H. & G. Arling (1983). "Differential Use of Health Services Among Disabled Elderly", *Research on Aging*, 5 (3), pp. 411-431.
- Wan, T.T.H. & B. Gill Odell (1981). "Factors Affecting the Use of Social and Health Services Among the Elderly", *Aging and Society*, 1, pp. 95-115.
- Wister, A. & P.A. Dykstra (2000). "Formal Assistance Among Dutch Older Adults: An Examination of the Gendered Nature of Marital History", *Canadian Journal on Aging/La revue canadienne du vieillissement*, 19 (4), pp. 508-535.
- Wolinsky, F.D. & R.J. Johnson (1991). "The Use of Health Services by older Adults", *Journal of Gerontology, Social Sciences*, 46 (6), pp. 345-357.







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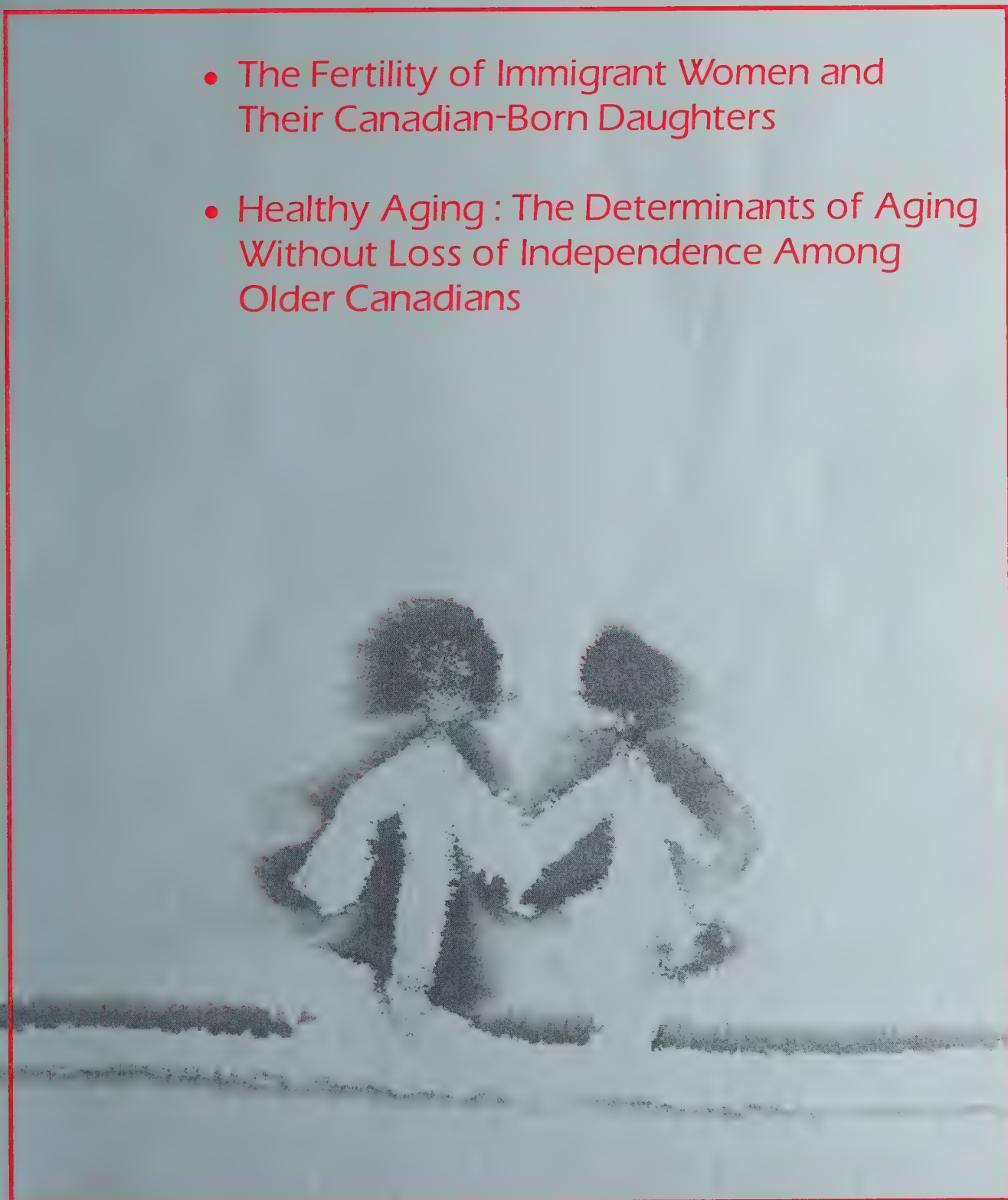




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**Alain Bélanger**  
Editor

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December 2003

Catalogue no. 91-209-XPE

Frequency: Annual

ISSN 0715-9293

Ottawa

The text was originally written in French.  
La version française de cette publication est disponible sur demande  
(n° 91-209-XPF au catalogue).

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- Document no. 5: “*A Review of Procedures for Estimating the Net Undercount of Censuses in Canada, the United States, Britain and Australia*” by D. Kerr - (1998, 28 pages, \$15.00).
- Document no. 4: “*Advantages of the One Year Mobility Variable for Breaking Down Interprovincial Migration by Age, Sex and Marital Status*” by M. Bédard and M. Michalowski - (1997, 58 pages, \$17.00).
- Document no. 3: “*New Birth Cohort Life Tables for Canada and Quebec, 1801-1991*” by R. Bourbeau, J. Légaré and V. Emond - (1997, 94 pages, \$17.00).
- Document no. 2: “*The Population in Collective Dwellings: Canada, 1971-1991*” by G. Smith - (1996, 50 pages, \$16.00).
- Document no. 1: “*Fertility Projections for Canada, Provinces and Territories, 1993-2016*” by R.B.P. Verma, S. Loh, S.Y. Dai and D. Ford - (1996, 28 pages, \$15.00).

## Acknowledgements

The editor is grateful to all of those who have contributed to this publication. In particular, he addresses his thanks to Yves Carrière, Réjean Lachapelle, Doug Norris and Mike Sheridan for their revision and comments on successive drafts. Special thanks are addressed to Carol D'Aoust, research assistant, for his dedication and initiative, which are fully appreciated.

# Table of Contents

	Page
Highlights .....	1
 <b>PART I - Current Demographic Analysis for Canada, 2002</b> <i>by Alain Bélanger et Laurent Martel</i>	
Demographic Accounts .....	9
Nuptiality .....	18
Divorces .....	27
Births and Fertility .....	32
Voluntary Interruptions of Pregnancy .....	43
Mortality .....	49
International Immigration .....	60
Internal Migration .....	72
Appendices .....	79
Glossary .....	120
 <b>PART II</b>	
The Fertility of Immigrant Women and Their Canadian-born Daughters <i>by Alain Bélanger and Stéphane Gilbert .....</i>	127
Healthy Aging: the Determinants of Aging Without Loss of Independence Among Older Canadians <i>by Laurent Martel, Alain Bélanger and Jean-Marie Berthelot .....</i>	153



# List of Tables

	Page
<b>PART I</b>	
1. Population as of January 1 and Population Growth Components, Canada, 1972-2002 .....	10
2. Marriages, First Marriages and Remarriages, Canada, 1971-2000 ....	19
3. Total First Marriage Rate, Canada, Provinces and Territories, Selected Years 1976-2000 .....	21
4. Crude Divorce Rate, Canada and Provinces, 1980-2000 .....	28
5. Trends in the Percentage Distribution of Total Fertility Rates by Birth Order, Canada, 1980, 1985, 1990, 1995 and 2000 .....	33
6. Number of Voluntary Interruptions of Pregnancy by Place and Abortions to Births Ratios, Canada, Provinces and Territories, 1999-2000 .....	45
7. Number of Abortions, Percentage Distribution and Rate per 1,000 Women, by Age Group, Canada, 1976, 1981, 1986, 1991-2000 .....	47
8. Life Expectancy at Birth for Selected Industrialized Countries, 1978-2000 .....	53
9. Evolution of Mortality from Diseases of the Circulatory System and from Tumours, by Sex, Canada, 1981-2000 .....	57
10. Deaths Due to HIV by Broad Age Groups and Sex, Canada, 1987-2000 .....	58
11. Number of Immigrants Admitted and Number Planned by Class According to the Immigration Plan, Canada, 2001 .....	60
12. Immigrants to Canada by Class, 1981-2001 .....	62
13. Number of Immigrants According to the 10 Main Countries of Birth by Class, Canada, 2001 .....	64
14. Countries of Birth from Which more than 2,000 Immigrants Came to Canada in 1999, 2000 or 2001 .....	65
15. Percentage Distribution of Landed Immigrants by Intended Province of Destination, Canada, 1971, 1981, 1986, 1990-2001 .....	67
16. Number of Immigrants and Percentage Distribution by Province of Destination and Class, Canada, 2001 .....	68
17. Number of Immigrants by Country of Birth and Province of Destination, Canada and Provinces, 2001 .....	70
18. Net Migration for Provinces and Territories, 1972-2001 .....	73
19. Annual Number of Interprovincial Migrants According to Revenue Canada Tax Files, 2000 .....	75

# List of Tables - Continued

	Page
<b>PART I</b>	
20. Annual Number of Interprovincial Migrants According to Revenue Canada Tax and Child Tax Credit Files, 2001 .....	76
 <i>Box</i>	
Summary Table. Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2001 .....	14
 <i>Appendices</i>	
A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002 .....	80
A2. Number of Marriages and Crude Marriage Rate, Canada, Provinces and Territories, 1981, 1986-2000 .....	106
A3. Age-specific First Marriage Rates by Age, Sex and Year of Birth, Canada .....	107
A4. Number of Divorces and Mean Duration of Marriages for Divorced Persons Divorced in the Year, Canada, Provinces and Territories, 1981, 1986, 1989-2000 .....	109
A5. Duration-specific Divorce Rate, Canada, Marriage Cohorts 1950-1951 to 1999-2000 .....	110
A6. Number of Live Births and Total Fertility Rate, Canada, Provinces and Territories, 1986-2000 .....	112
A7. Total Fertility Rate by Birth Order and Fertility Rate by Age Group, Canada, Provinces and Territories, 1998-2000 .....	113
A8. Number of Total Deaths and Infant Deaths, Canada, Provinces and Territories, 1981, 1986, 1989-2000 .....	114
A9. Life Expectancy at Different Ages, Canada, 1971 to 2000 .....	115
A10. Landed Immigrants in Canada by Country of Birth, 1981, 1986, 1991-2001 .....	116
A11. Population as of July 1, by Age and Sex, Canada, 1999, 2000, 2001 .	118

# List of Tables - Continued

	Page
<b>PART II</b>	
<b>The Fertility of Immigrant Women and Their Canadian-born Daughters</b>	
1. Comparison of Fertility Rates by Age Group and the Total Fertility Rate, Estimated According to the Own Children Method and Vital Statistics, Women Born in Canada and Abroad, Canada, 1996-2001	132
2. Change in the Number of Children Under Five Years of Age Born in Canada by Mother's Place of Birth, Canada, 1981-2001 .....	134
3. Total Fertility Rate of Canadian-born Women and Canadian Women Born Abroad by Region of Birth, Canada, 1976-1981 to 1996-2001 ..	136
4. Change in the Number of Women Aged 15 to 54 by Place of Birth, Canada, 1981-2001 .....	136
5. Total Fertility Rate of Immigrant Women Admitted During the Five Years Preceding the Census According to Whether the Child was Born in Canada or Abroad, Canada, 1981 to 2001 .....	142
6. Age-specific Fertility Rate and Total Fertility Rate by Generation, Canada, 1996-2001 .....	145
7. Distribution of the Female Population Aged 15 to 54 in Different Generational Groups by Selected Characteristics, Canada, 2001 .....	146
8. Relative Likelihood of a Woman Aged 15 to 54 Living with at Least One Child Aged 0 to 4 in her Census Family, Canada, 2001 .....	148
<b>Healthy Aging: the Determinants of Aging Without Loss of Independence Among Older Canadians</b>	
1. Socio-economic and Health Characteristics of Respondents Aged 65 and Over Living in Private Households, Based on their Participation in Successive Cycles of the NPHS Survey .....	156
2. Percentage Distribution of Seniors by Selected Characteristics, Total Elderly Population, Those in Good Functional Health in 1994 and Those Remaining Independent from 1994 to 2000, Canada .....	160
3. Odds Ratios of Remaining Independent Between 1994 and 2000, Population Aged 65 and Over, Canada .....	163
4. Pseudo-R <sup>2</sup> s of the Various Groups of Variables .....	165



# List of Figures

	Page
<b>PART I</b>	
1. Proportion of Persons Divorced or Separated , by Age Group, Canada, 1991 to 2001 .....	20
2. Proportion of Persons Living in Common-law Unions, by Age Group, Canada, 1981 to 2001 .....	23
3. Variations of the Total First Marriage Rate and the Gross Domestic Product per Inhabitant, Canada, 1982-2000 .....	24
4. First Marriage Rates by Sex, Canada .....	25
5. Duration-specific Divorce Rates for Various Durations of Marriage, by Year of Divorce and Total Divorce Rate, Canada, 1969-2000 .....	31
6. Fertility Rate by Age Group, Canada, 1972-2000 .....	34
7. Average Age at Maternity by Birth Order, Canada, 1944-2000 .....	36
8. Total Fertility Rate, 1921-2000 and Completed Fertility, 1906-1970, Canada .....	37
9. Fertility Rate by Age for Selected Cohorts, Canada .....	38
10. Total Fertility Rate for Selected Industrialised Countries, 1979-2000 .....	39
11. Total Fertility Rate for Census Metropolitan and Non-metropolitan Areas by Province, 1996-2000 .....	40
12. Total Fertility Rate by Census Metropolitan Area, 1996-2000 .....	42
13. Total Abortion Rate and Abortions/Births Ratio, Canada, 1974-1999 .....	46
14. Index of Monthly Deaths for Three Major Age Groups, Canada, 1999 and 2000 .....	50
15. Infant, Neo-natal and Early Neo-natal Mortality Rates, Canada, 1926-2000 .....	51
16. Ratio of Provincial and Canadian Life Expectancy at Birth by Sex, 1931-2000 .....	54
17. Number of Immigrants and Immigration Rate, Canada, 1944-2001 ...	61

## PART II

### The Fertility of Immigrant Women and Their Canadian-born Daughters

1. Change in the Proportion of Children Under Five Years of Age with an Immigrant Mother by Mother's Place of Birth, Canada, 1981-2001 ..	135
2. Change in the Proportion of Foreign-born Women Aged 15 to 54 by Place of Birth, Canada, 1981-2001 .....	137

List of Figures- Continued

	Page
3. Total Fertility Rate of Women Born Abroad by Period of Immigration, Canada, 1981-2001 .....	141
4. Total Fertility Rate of Women Born Abroad by Period of Immigration and Region of Origin, Canada, 1996-2001 .....	143
5. Age-specific Fertility Rates of Immigrant Women by Period of Immigration, Canada, 1996-2001 .....	144

Box

Grouping of Countries of Birth of Immigrants Received in Canada .	138
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Healthy Aging: the Determinants of Aging Without Loss of Independence Among Older Canadians

1. Dynamics of Functional Health Among Elderly Canadians, 1994-2000 .....	157
2. Proportion of the Elderly Population in Good Functional Health in 1994 Who Remained Independent from 1994 to 2000, Canada .....	158

# Highlights

## PART I

- During 2001, the population of Canada surpassed 31 million, reaching 31,173,900 on January 1, 2002. The growth rate was 11.2 per 1,000 in 2001, up from 9.8 per 1,000 in 2000.
- The Canadian population grew by 345,800 in 2001. More than two-thirds of the growth resulted from migratory increase, which stood at 235,500 (7.6 per 1,000), an increase (36,700) in relation to 2000.
- In 2001, two provinces saw their population grow at a rate exceeding the national average: Alberta (18.6 per 1,000) and Ontario (17.5 per 1,000). By contrast, four provinces saw their population decrease during the year, resulting in a negative growth rate: Newfoundland and Labrador (-8.1 per 1,000), Saskatchewan (-5.8 per 1,000), New Brunswick (-0.8 per 1,000) and Nova Scotia (-0.1 per 1,000).
- With a growth rate of 18.6 per 1,000 in 2001, up slightly from 2000, Alberta remained the province with the strongest population growth in Canada, a position that it had held since 1997.
- Ontario's population growth was the highest since 1989. That province's population grew by approximately 208,100. Nearly three-quarters of the growth (71%) resulted from net international immigration.
- The population of Saskatchewan fell below the one million level and stood at 997,900 on January 1, 2002.

### XXX

- The year 1999 was characterized by an increase of 2,900 marriages, a gain of 1.9% compared with the previous year.
- The increase in the number of marriages merely kept pace with the growth of the population. The gross marriage rate was 5.11 per 1,000 in 2000, the same level as in 1997.
- Remarriages continue to increase. They accounted for 35% of all marriages in 2000, the highest proportion ever.
- According to the total marriage rate calculated for 2000, approximately one-third of single persons will marry at some point in their life in Quebec; in Newfoundland and Labrador and Prince Edward Island, more than two-thirds will do so.



- The proportion of persons living common-law increased by roughly 3% between the 1996 Census and the 2001 Census. Common-law unions continue to grow in popularity at all ages, and in 2001, just under one person in five between the ages of 25 and 29 in Canada was living in a couple relationship without being married.

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- The number of divorces increased by 3.4% between 1998 and 1999 in Canada, representing an additional 2,305 divorces. In 2000, the number increased for a third consecutive year, reaching 71,100, although this latest increase was smaller (0.3%).
- Among the Canadian provinces, the variations are greater, and in general, the gross divorce rate rises from east to west across Canada.
- In 2000, the total divorce rate reached 3,548 divorces per 10,000 marriages, meaning that 35.5% of marriages would end in divorce if divorce rates remained equal to those observed in 2000.

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- In 2000, there were 327,900 births in Canada, down by nearly 9,400 births from the number registered the previous year. This was a decrease of 2.8%, the third largest annual decrease in the last decade.
- In 2000, the total fertility rate was 1.49 children per woman, the lowest rate ever recorded. Fertility in Canada is now becoming more like that of countries with very low fertility than that of France or the Anglo-Saxon countries.
- The total fertility rate varied between 1,256 children per 1,000 women in Newfoundland and Labrador and 1,796 children per 1,000 women in Saskatchewan.
- The number of births fell in all provinces between 1999 and 2000, but the decrease was especially sizable in the Atlantic provinces: 4.9% in Prince Edward Island, 4.8% in Nova Scotia, 3.7% in Newfoundland and Labrador and 3.5% in New Brunswick.
- The fall in fertility rates is especially substantial for women aged 20 to 24. Falling below the threshold of 60 per 1,000 for the first time in 2000, it has decreased by more than half in less than 30 years.
- Fertility is higher in non-metropolitan areas than in metropolitan areas. The rate for all metropolitan areas was 1.48 children per woman, compared to 1.67 children per woman for non-metropolitan areas.

- All metropolitan areas east of Oshawa had fertility rates below the national average. The rate was below 1.4 children per woman in St. Johns (1.24), Halifax (1.38), Quebec (1.33) and Trois-Rivières (1.38). Oshawa, with 1.66 children per woman, had the highest rate of any metropolitan area and Victoria the lowest, with 1.23 children per woman.

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- There were 105,400 abortions in Canada in 2000.
- With the decrease in births, there is now one abortion for every three births in Canada. The proportion is 43% in Quebec, where it is the highest in Canada, and 11% in Prince Edward Island, where it is the lowest.
- In 2000, the total abortion rate was 0.5 abortions per woman. Before 1988, it ranged between 0.30 and 0.35 abortions per woman.
- Approximately one abortion out of two was performed on a woman in her twenties.

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- There were 218,007 deaths in Canada in 2000, down 1,519 from the previous year. This was a decrease of 0.7%, the first since 1981. The decrease was greatest in Quebec (-2.6%), followed by British Columbia (-2.0%).
- Canadians enjoy one of the longest life expectancies at birth: 76.7 years and 82.0 years respectively for males and females in 2000.
- In 2000, the life expectancy of Canadian males and females increased by 0.3 years compared with 1999.
- The gap between the life expectancies of males and females at birth in 2000 was 5.2 years, whereas in 1976 it was 7.3 years. Even though the gap between the two sexes is narrowing, male life expectancy in 2000 was scarcely higher than female life expectancy was in 1971.
- Newfoundland and Labrador had the lowest life expectancy in Canada, both for males (75.0 years) and females (80.2 years). British Columbia had the highest, with 77.9 years and 82.9 years respectively.

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- Canada received 250,400 new immigrants in 2001. This was 23,100 more than in 2000, representing an increase of 10%.
- Some 150,400 persons entered Canada in 2001 under the economic part of the immigration policy, accounting for 60% of all immigrants.

- Both the number and the proportion of refugees admitted to Canada in 2001 declined slightly from 2000, since the 27,900 persons admitted under this part represented 11% of all immigrants received, compared to 13% in 2000.
- More than 62% of immigrants admitted to Canada in 2001 were natives of Asia, with most of them coming from China (including Hong Kong), India, Pakistan and the Philippines. China alone provided Canada with 43,800 immigrants, or practically one-fifth of the whole.
- Three provinces have long attracted the vast majority (nearly 90%) of immigrants: Ontario, Quebec and British Columbia.
- Ontario accounted for 40% of the Canadian population in 2001. It received 148,700 immigrants that year, or nearly 60% of the Canadian total. Never in recent history had Ontario received as many international immigrants as in 2001.

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- Ontario, the only province other than Alberta to have a sizable positive balance in its migratory exchanges with the other provinces, saw its net gains decline by half in 2001. They stood 11,400, compared to 23,300 in 2000.
- Newfoundland and Labrador reduced its migratory losses in its exchanges with the other provinces, but this province's net migration has consistently been negative since 1982. Out-migration rates remain at high levels (24 per 1,000 in 2001). The improvement in the province's net migration was attributable more to an increase in the number of in-migrants, which went from 8,100 to 9,400 between 2000 and 2001, than to a decrease in the number of out-migrants, which went from 13,000 to 12,800.
- For the first time since 1994, Quebec lost fewer than 10,000 persons in its migratory exchanges with the other Canadian provinces.
- Nearly 15,000 residents of Saskatchewan moved to Alberta in 2001. Those 15,000 persons, who were both the largest outflow from Saskatchewan and the second largest inflow of migrants to Alberta, accounted for nearly 30% of all out-migrants from Saskatchewan.
- In five years, between 1996 and 2001, Alberta gained more than 140,000 persons in its exchanges with the other provinces. In 2001, Alberta continued to have the largest net gain (25,100).
- Between 2000 and 2001, British Columbia's negative net migration declined by 57%, going from -14,800 to -6,300, but the flow of 27,200 persons who left British Columbia to settle in Alberta was the largest of all interprovincial flows.



## **PART II**

### **The Fertility of Immigrant Women and Their Canadian-born Daughters**

- In the 2001 Census, the proportion of children under five born in Canada whose mother was born abroad (22%) was higher than the proportion of the population who were immigrants (18%).
- In 1981, children whose mother was born in Europe accounted for 54% of all children whose mother was born abroad, whereas those whose mother was born in Asia accounted for only 22% of the whole. In the 2001 Census, children whose mother was born in Europe accounted for only 22% of all children whose mother was born abroad, while those whose mother was of Asian origin accounted for nearly half (48%).
- Both for women born abroad and for native-born Canadian women, the fertility trend is downward during the period studied. The total fertility rate for women born in Canada went from 1.64 children per woman for the period 1976-1981 to 1.47 children per woman for the period 1996-2001, a decrease of 10%. Over the same time span, the rate for women born abroad also declined 10%, going from 2.03 children per woman to 1.82 children per woman.
- Women from Southern Europe are among those who saw their fertility decline the most during the quarter century studied: their total fertility rate fell from 2.17 children per woman to 1.62 children per woman, a drop of 25%.
- Even though it has steeply declined, the fertility of Asian-born women continues, according to the 2001 Census, to be much higher than that of Canadian-born women (29% higher). The total fertility rate for these women went from 2.54 children per woman for the period 1976-1981 to 1.89 children per woman for the most recent period, 1996-2001.
- In the 2001 Census, the fertility of women born in South Asia (2.5 children per woman), Central-West Asia and the Middle East (2.2 children per woman) and Africa (2.4 children per woman) substantially exceeded the level of two children per woman.
- In 1981, children born in Canada to women originating from South Asia and the Middle East accounted for less than 10% of all children whose mother was born abroad, whereas in 2001 they accounted for one-quarter of the total.

- The fertility of women born abroad tends, relatively soon after their arrival, to diminish with the length of time that has elapsed since their immigration. According to the 2001 Census, the fertility of immigrant women once they have arrived in Canada is 3.1 children per woman for those who arrived less than five years earlier and 1.4 children per woman for those who received their immigrant status 15 to 19 years before the census.
- The total fertility rate for the daughters of immigrant women is 1.4 children per woman. It is lower than that of first-generation women (1.8 children per woman) and that of women of the third generation or higher (1.5 children per woman), but these differences appear to be more the result of differences in the composition of each group than of the cohort effect. When other variables such as visible minority status, low-income status and education are factored out, fertility differences between the generations disappear completely.

### **Healthy Aging: The Determinants of Aging Without Loss of Independence Among Older Canadians**

- Between 1994 and 2000, some 53% of elderly Canadians living in private households remained independent over a six-year period.
- According to the National Population Health Survey, some 53% of seniors living in private households who were independent in 1994 were still independent six years later in 2000.
- In relation to the group of persons aged 65 to 69, seniors aged 80 and over are ten times less likely to remain independent over a six-year period.
- Non-smoking, regular physical activity and having a normal weight all play a significant role in determining whether elderly Canadians maintain their independence over the long term.
- Seniors who have never smoked are almost twice as likely as smokers to maintain their independence.
- Canadians aged 65 and over who are physically active see their chances of remaining independent over a six-year period increase by more than 50% compared to those who do not regularly engage in physical activities.
- Diabetes, heart disease and bronchitis/emphysema significantly reduce seniors' chances of remaining independent over a six-year period.
- Beyond individual characteristics over which persons have no control, chronic conditions and living habits are major factors influencing the long-term maintenance of independence in old age.

# **PART I**





## DEMOGRAPHIC ACCOUNTS

*During 2001, the population of Canada passed the 31 million mark to reach, according to estimates of the Demography Division, 31,173,900 on January 1, 2002.* This was an increase of 345,800 compared with the same date the previous year, representing a growth rate of 11.2 per 1,000, up from the year 2000.

*More than two-thirds of the increase resulted from migratory growth,* which stood at 235,500 in 2001 (7.6 per 1,000), up substantially (36,700) from 2000. Canada received 250,600 international immigrants in 2001, which was 23,200 more than in 2000. Natural increase stood at 114,200 in 2001 (3.7 per 1,000), whereas it reached 207,000 ten years earlier (7.4 per 1,000). With each year that passes, the growth of the Canadian population depends a little more on the contribution of migration, and this trend is likely to continue in the coming decades.

### Population of the Provinces

Because there is considerable variation in the power of the different provinces to attract interprovincial and international migrants, population exchanges tend to concentrate Canadian population growth in only a few provinces. *In 2001, two provinces registered a population growth rate above the Canadian average: Ontario (17.5 per 1,000) and Alberta (18.6 per 1,000).* By contrast, *four provinces saw their respective populations decline during the year,* resulting in a negative growth rate: *Newfoundland and Labrador (-8.1 per 1,000), whose populations fell for the ninth consecutive year, Saskatchewan (-5.8 per 1,000),* which experienced a decline for the fourth consecutive year, New Brunswick (-0.8 per 1,000) and Nova Scotia (-0.1 per 1,000). All other provinces experienced moderate population growth in 2001.

With a growth rate of 18.6 per 1,000 in 2001, increasing slightly from 2000, Alberta maintained the position that it has held since 1997 as the province with the strongest population growth in Canada. It owes this to the combination of a rate of natural increase (6.6 per 1,000, or 20,000) which is still the largest for any province, and a high rate of migratory growth, 12.0 per 1,000 (36,800). The migratory growth results primarily from the major gains that Alberta continues to make through internal migration. In 2001, 75,500 persons left other Canadian provinces to settle in Alberta and 45,900 Albertans migrated to other provinces. The resulting net internal migration of 24,600 represents a rate of 8.1 per 1,000, by far the highest for any province. Less sizable but still positive, net international migration (12,200) plays a smaller role in explaining the strong growth of Alberta's population.





**Rates (for 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents
		Total	Natural	Migratory					
1972	22,092.6	11.48	8.32	4.45	15.63	7.31	5.49	1.18	0.13
1973	22,347.6	13.43	7.97	6.73	15.26	7.29	8.19	1.81	0.35
1974	22,649.6	14.45	8.06	7.65	15.37	7.31	9.58	1.84	-0.09
1975	22,979.2	14.04	8.30	6.98	15.53	7.22	8.12	1.48	0.34
1976	23,304.2	12.27	8.23	5.04	15.35	7.12	6.37	1.21	-0.13
1977	23,591.8	10.87	8.17	3.53	15.24	7.06	4.84	1.23	-0.08
1978	23,849.7	9.28	7.96	2.16	14.98	7.02	3.60	1.32	-0.12
1979	24,072.2	11.30	8.17	3.95	15.12	6.95	4.63	1.01	0.33
1980	24,345.8	13.06	8.13	5.74	15.13	7.00	5.86	0.72	0.61
1981	24,665.9	12.65	8.07	5.42	14.96	6.89	5.19	0.99	1.22
1982	24,979.8	10.50	7.91	3.45	14.86	6.95	4.83	1.24	-0.15
1983	25,243.4	9.44	7.85	2.44	14.73	6.88	3.52	1.25	0.17
1984	25,483.0	9.33	7.86	2.31	14.73	6.86	3.46	1.14	-0.01
1985	25,721.9	9.34	7.52	2.65	14.54	7.02	3.26	1.04	0.42
1986	25,963.1	11.28	7.23	4.43	14.28	7.06	3.80	1.16	1.78
1987	26,257.7	13.15	6.99	6.21	13.99	7.00	5.75	1.09	1.55
1988	26,605.3	16.08	6.96	9.17	14.05	7.08	6.02	0.91	4.06
1989	27,036.7	15.87	7.40	8.52	14.41	7.01	7.03	0.98	2.47
1990	27,469.3	14.19	7.72	6.52	14.66	6.94	7.82	0.90	-0.40
1991	27,862.0	11.22	7.39	4.32	14.37	6.98	8.31	1.55	-2.44
1992	28,176.3	12.47	7.13	6.14	14.06	6.93	8.99	1.72	-1.13
1993	28,529.9	10.59	6.40	4.98	13.54	7.14	8.95	1.77	-2.21
1994	28,833.5	10.61	6.14	5.25	13.29	7.14	7.74	1.92	-0.57
1995	29,141.1	10.46	5.71	5.52	12.90	7.19	7.27	1.75	0.01
1996	29,447.5	10.30	5.18	5.63	12.37	7.19	7.64	1.68	-0.33
1997 ID	29,752.5	9.29	4.45	5.15	11.66	7.22	7.23	2.10	0.03
1998 ID	30,030.1	7.71	4.12	3.89	11.36	7.23	5.78	1.92	0.03
1999 ID	30,262.4	8.77	3.87	5.20	11.10	7.22	6.25	1.79	0.74
2000 ID	30,528.9	9.76	3.58	6.48	10.69	7.11	7.41	1.86	0.93
2001 ID	30,828.1	11.15	3.68	7.60	10.77	7.08	8.08	1.79	1.30
2002 PR	31,173.9	••	••	••	••	••	••	••	••

<sup>1</sup> The residual consists of the distribution over five years of the error of closure at the end of the intercensal period.

(PD) Final postcensal estimates, (PR) Revised postcensal estimates, based on 1996, as of September 17, 2003.

**Source:** Statistics Canada, Demography Division.

Manitoba, Saskatchewan and British Columbia posted negative net interprovincial migration in 2001, partly because of their proximity to Alberta. For British Columbia, this was the fourth consecutive negative migratory balance, the statistics for 2001 show a decrease in British Columbia's net losses in its exchanges with other provinces: the net migration of -7,300 is about half that observed in the previous three years. The resulting net migration rate of -1.8 per 1,000 is up considerably from the figure observed in 2000. British Columbia continues to post major gains in its international migration. As a result, this province saw its rate of population growth rise substantially in 2001. It reached 10.0 per 1,000 in 2001.

In Saskatchewan, natural increase no longer offsets the losses registered in its exchanges with the other provinces resulting in population decline. The growth rate was -5.8 per 1,000 in 2001 (-5,700). While still positive, Saskatchewan's low net international migration (300) is unable to offset the deficit in interprovincial migration. *The population of the province dropped below the one million mark, reaching 997,900 in 2002.*

Up to now, Manitoba has managed to offset its migratory deficit through natural increase. Despite its higher birth rate, which is primarily due to a larger aboriginal population, Manitoba has seen a slower natural increase owing to a continued low fertility rate and an aging population. International immigration is too low to offset a level of net interprovincial migration which, with a few exceptions, is chronically negative.

Ontario's population growth (17.5 per 1,000) is the highest since 1989. The province's population has increased by 208,100 in 2001 and nearly three-quarters of the growth (71%) resulted from net international immigration. Ontario has long been the largest beneficiary of international immigration, and 2001 was no exception. Nearly 60% of immigrants received in Canada in 2001 chose to settle in Ontario (148,700). This was a sizable increase from the previous year, when 133,500 immigrants settled there. *Never before in its recent history has Ontario received as many international immigrants as in 2001.* Ontario gained only slightly (10,600) in its interprovincial exchanges (0.9 per 1,000), even though the flows in and out of the province were sizable (72,200 in-migrants and 61,600 out-migrants).

Quebec's rate of population growth has been increasing since 1997, and in 2001 it stood at 6.2 per 1,000, twice as high as four years ago. The growth is divided between natural increase (2.6 per 1,000) and migratory growth (3.6 per 1,000). Quebec is the only province for which both these components increased in 2001 compared with 2000. There were 1,700 more births in Quebec in 2001 than in 2000, ending ten years of steady declines in the balance of births over deaths. Quebec also attracted some 5,000 more international immigrants in 2001 than in 2000, for a total of 37,600 persons. Combined

with a reduction in the net outflow in exchanges with other provinces, Quebec increased its migratory growth rate from 2.0 to 3.6 per 1,000 between 2000 to 2001.

Among the Atlantic provinces, Prince Edward Island is the only one to post a positive population growth (3.1 per 1,000). Newfoundland and Labrador continued to lose population in 2001, although less rapidly than in 2000 (-8.1 per 1,000 in 2001 compared with -12.3 per 1,000 in 2000) owing to a reduction in migratory losses in its exchanges with other provinces.

Nova Scotia and New Brunswick are experiencing a situation of almost zero population growth, with growth rates of respectively -0.1 per 1,000 and -0.8 per 1,000. In both these provinces, natural increase was sufficient in 2001 to offset the slight migratory deficit caused by negative net interprovincial migration.

In the three northern territories, the situation was mixed, with strong growth in Nunavut (15.2 per 1,000), moderate growth in the Northwest Territories (11.0 per 1,000) and slow growth in Yukon (0.3 per 1,000). In general, natural increase was much higher in the territories than elsewhere in Canada, even reaching 21.0 per 1,000 in Nunavut.

With continuing low fertility and the aging of the population, natural increase is declining, and losing its importance as a factor in the growth of the population of Canada and the provinces. Migration, whether interprovincial or international, is now the principle driver for population growth. For the provinces and territories, this means that continued population growth depends — and in the future will increasingly depend — on their ability to attract immigrants and retain them or to attract Canadians from other provinces. Current trends display a growing concentration of population growth in only a few provinces, especially Ontario, British Columbia and Alberta.



**Summary Table. Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2001**

	Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.
Birth Rate (per 1,000)	1981	17.7	15.4	14.1	14.9	14.6	13.9	15.5
	1986	14.1	15.0	13.9	13.5	12.6	14.2	15.6
	1991	12.4	14.4	13.1	12.8	13.8	14.5	15.6
	1996	10.3	12.5	11.4	10.9	11.8	12.6	13.7
	1998	9.2	11.1	10.3	10.5	10.4	11.7	12.7
	1999	9.5	11.1	10.3	10.1	10.0	11.4	12.5
	2000	9.2	10.6	9.8	9.8	9.8	10.9	12.3
	2001 (P)	9.0	10.1	9.5	9.6	10.0	11.1	12.2
Mortality Rate (per 1,000)	1981	5.6	8.0	8.1	7.3	6.5	7.1	8.3
	1986	6.1	8.7	8.2	7.5	7.0	7.2	8.2
	1991	6.6	9.1	7.9	7.3	7.0	7.0	8.1
	1996	7.0	9.4	8.3	7.8	7.2	7.1	8.4
	1998	7.8	8.9	8.7	8.4	7.4	7.1	8.6
	1999	7.7	8.3	8.2	8.1	7.5	7.1	8.6
	2000	8.2	9.0	8.4	8.1	7.2	7.0	8.6
	2001 (P)	7.9	8.5	8.4	8.1	7.3	6.8	8.5
Total Fertility Rate (number of children per woman aged 15-49)	1981	..	1.88	1.62	1.67	1.57	1.58	1.82
	1986	..	1.79	1.58	1.53	1.37	1.60	1.82
	1991	1.44	1.85	1.58	1.55	1.65	1.66	1.97
	1996	1.30	1.74	1.52	1.46	1.60	1.60	1.90
	1998	1.22	1.57	1.42	1.45	1.48	1.53	1.82
	1999	1.27	1.59	1.43	1.42	1.45	1.52	1.81
	2000	1.26	1.52	1.37	1.39	1.44	1.47	1.80
Total First Marriage Rate (per 1,000) (males aged 17-49, females aged 15-49)	1981 M	653	701	686	660	546	692	722
	F	631	668	672	649	560	685	712
	1986 M	589	711	595	600	430	623	615
	F	580	742	631	626	442	658	660
	1991 M	600	727	575	581	381	610	600
	F	613	730	606	608	427	653	651
	1996 M	607	747	586	581	327	579	582
	F	624	782	597	618	363	609	626
	1999 M	711	767	607	563	319	582	623
	F	742	760	622	601	352	613	654
	2000 M	715	786	620	609	336	566	600
	F	749	785	625	654	371	596	636
Rate of Natural Increase (per 1,000)	1981	12.0	7.3	6.0	7.6	8.0	6.7	7.2
	1986	7.9	6.3	5.7	6.0	5.6	7.0	7.4
	1991	5.8	5.3	5.2	5.4	6.8	7.5	7.5
	1996	3.3	3.1	3.0	3.0	4.5	5.5	5.3
	1998	1.4	2.2	1.6	2.1	3.0	4.6	4.1
	1999	1.7	2.8	2.1	2.1	2.6	4.3	3.9
	2000	1.0	1.6	1.3	1.7	2.6	3.9	3.7
	2001 (P)	1.1	1.6	1.1	1.5	2.6	4.2	3.7
Total Growth Rate (per 1,000)	1981	-1.4	1.7	3.9	0.1	6.5	10.7	7.4
	1986	-2.8	1.0	4.8	1.6	9.0	18.1	6.2
	1991	2.0	0.5	5.6	4.5	6.7	12.2	3.3
	1996	-14.7	6.1	2.8	1.0	4.0	12.4	4.2
	1998 ID	-17.1	0.4	-0.4	-2.5	3.3	11.3	2.8
	1999 ID	-8.9	3.3	2.6	0.9	4.1	13.7	4.8
	2000 ID	-12.3	-0.5	-1.2	-1.4	4.6	16.7	3.5
	2001 ID	-8.1	3.1	-0.1	-0.8	6.2	17.5	2.9

See notes at the end of this table.

**Summary Table. Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2001 - Continued**

	Year	Sask.	Alta	B.C.	Yuk.	N.W.T.	Nun.	Can.
Birth Rate (per 1,000)	1981	17.6	18.6	14.7	21.9	27.5 <sup>4</sup>	..	15.0
	1986	17.0	18.1	14.0	19.5	27.6 <sup>4</sup>	..	14.3
	1991	15.3	16.5	13.5	19.8	25.9 <sup>4</sup>	..	14.4
	1996	13.1	13.6	11.9	14.2	19.6	29.3	12.4
	1998	12.6	13.1	10.8	12.7	16.6	25.3	11.4
	1999	12.4	12.9	10.5	12.5	16.2	27.4	11.1
	2000	12.0	12.3	10.1	12.2	16.6	26.5	10.7
	2001 (P)	12.3	12.3	10.0	11.4	15.0	25.3	10.8
Mortality Rate (per 1,000)	1981	7.7	5.6	7.0	5.8	4.1 <sup>4</sup>	..	6.9
	1986	7.8	5.6	7.1	4.6	4.3 <sup>4</sup>	..	7.1
	1991	8.1	5.6	7.1	4.0	3.5 <sup>4</sup>	..	7.0
	1996	8.6	5.9	7.1	3.8	3.7	4.7	7.2
	1998	8.8	5.8	7.0	4.3	3.6	5.4	7.2
	1999	8.9	5.8	7.0	4.4	4.0	4.7	7.2
	2000	8.9	5.8	6.8	5.1	3.9	4.7	7.1
	2001 (P)	8.7	5.8	7.0	4.4	4.0	4.4	7.1
Total Fertility Rate (number of children per woman aged 15-49)	1981	2.11	1.85	1.63	2.04	2.84 <sup>4</sup>	..	1.65
	1986	2.02	1.84	1.61	1.95	2.84 <sup>4</sup>	..	1.59
	1991	2.04	1.89	1.68	2.15	2.44	3.54	1.70
	1996	1.90	1.74	1.55	1.68	2.23	3.37	1.62
	1998	1.83	1.71	1.45	1.62	1.97	2.97	1.54
	1999	1.82	1.71	1.42	1.60	1.92	3.23	1.53
	2000	1.76	1.64	1.38	1.62	2.00	3.13	1.49
	2001 (P)	1.76	1.64	1.38	1.62	2.00	3.13	1.49
Total First Marriage Rate (per 1,000) (males aged 17-49, females aged 15-49)	1981 M	710	644	684	693	457 <sup>4</sup>	..	645
	1981 F	698	689	695	715	474 <sup>4</sup>	..	651
	1986 M	588	566	582	484	351 <sup>4</sup>	..	558
	1986 F	628	616	623	573	399 <sup>4</sup>	..	589
	1991 M	622	597	601	470	284 <sup>4</sup>	..	548
	1991 F	656	643	661	521	311 <sup>4</sup>	..	594
	1996 M	628	569	521	453	268 <sup>4</sup>	..	512
	1996 F	653	613	563	486	282 <sup>4</sup>	..	548
	1999 M	647	573	507	381	237 <sup>4</sup>	..	516
	1999 F	663	616	537	469	256 <sup>4</sup>	..	548
	2000 M	635	563	521	431	287 <sup>4</sup>	..	515
	2000 F	643	602	549	423	306 <sup>4</sup>	..	547
Rate of Natural Increase (per 1,000)	1981	9.9	13.0	7.7	16.1	23.3 <sup>4</sup>	..	8.1
	1986	9.2	12.5	6.9	14.9	23.3 <sup>4</sup>	..	7.2
	1991	7.2	10.9	6.4	15.8	22.4 <sup>4</sup>	..	7.4
	1996	4.5	7.7	4.8	10.3	16.0	24.6	5.2
	1998	3.8	7.3	3.8	8.4	13.1	19.9	4.1
	1999	3.5	7.1	3.5	8.1	12.2	22.7	3.9
	2000	3.2	6.6	3.3	7.1	12.7	21.7	3.6
	2001 (P)	3.5	6.6	3.0	7.0	11.0	21.0	3.7
Total Growth Rate (per 1,000)	1981	11.4	39.2	22.9	-22.3	36.8 <sup>4</sup>	..	12.6
	1986	2.6	5.9	11.4	31.4	-1.6 <sup>4</sup>	..	11.3
	1991	-1.2	15.6	25.0	38.8	37.8 <sup>4</sup>	..	11.2
	1996	2.3	16.7	22.8	21.2	1.1	17.6	10.3
	1998 ID	-0.6	23.1	5.7	-24.5	-14.3	18.8	7.7
	1999 ID	-5.7	16.5	7.7	-8.3	-0.2	21.3	8.8
	2000 ID	-7.6	17.9	7.1	-11.5	0.1	23.8	9.8
	2001 ID	-5.8	18.6	10.0	0.3	11.0	15.2	11.2

See notes at the end of this table.

**Summary Table. Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2001 - Continued**

	Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.
Population Aged 65 + as a Percentage of the Total Population	1981	7.7	12.1	10.9	10.0	8.8	9.9	11.8
	1986	8.7	12.6	11.8	11.0	9.8	10.7	12.4
	1991	9.6	13.1	12.5	12.0	11.1	11.6	13.3
	1996	10.7	12.9	12.9	12.5	12.0	12.2	13.5
	1998 PD	11.3	13.1	13.1	12.9	12.4	12.4	13.6
	1999 PD	11.5	13.2	13.2	12.9	12.6	12.5	13.6
	2000 PR	11.7	13.3	13.3	13.0	12.8	12.6	13.6
	2001 PR	11.9	13.4	13.5	13.1	13.0	12.6	13.6
Total Age Dependency Ratio (in percentage) <sup>1</sup>	1981	78.2	76.0	67.0	69.5	55.9	58.9	67.7
	1986	68.1	68.6	61.1	62.5	52.2	55.0	64.0
	1991	59.7	67.3	59.1	59.7	53.5	55.5	65.5
	1996	54.3	63.5	57.7	56.5	54.2	57.4	65.2
	1998 PD	52.5	61.9	56.6	55.3	53.5	57.1	64.6
	1999 PD	51.6	61.1	55.9	54.6	52.9	56.7	64.0
	2000 PR	50.7	60.2	55.4	54.0	52.5	56.2	63.4
	2001 PR	49.9	59.3	54.7	53.3	52.2	55.6	62.9
Life Expectancy at Birth (in years) <sup>2</sup>	1981 M	72.1	72.9	71.0	71.2	71.2	72.4	72.3
	F	78.7	80.5	78.6	79.1	78.9	79.2	78.9
	1986 M	72.8	72.8	72.4	72.7	72.2	73.8	73.2
	F	79.2	..	79.5	80.1	79.7	80.0	80.0
	1991 M	73.7	73.2	73.7	74.3	73.8	75.0	74.6
	F	79.5	..	80.3	80.9	80.9	81.0	80.7
	1996 M	74.4	74.5	74.8	74.8	74.6	75.9	75.2
	F	80.2	81.5	80.6	81.2	81.0	81.3	80.5
	1998 M	74.7	75.6	75.3	75.0	75.1	76.6	75.3
	F	79.9	..	80.8	81.3	81.3	81.6	80.7
	1999 M	74.9	75.2	75.6	75.3	75.6	76.9	75.2
	F	80.1	..	81.1	81.5	81.6	81.8	80.8
	2000 M (P)	75.0	..	76.0	75.7	76.0	77.1	75.3
	F (P)	80.2	..	81.4	81.7	82.0	82.0	80.9
	1981	10.7	13.2	11.5	10.9	8.5	8.8	11.9
	1986	8.5	6.7	8.4	8.3	7.1	7.2	9.2
	1991	7.8	6.9	5.7	6.1	5.9	6.3	6.4
Infant Mortality Rate (per 1,000)	1996	6.6	4.7	5.6	4.9	4.6	5.7	6.7
	1998	6.2	8.0	4.6	6.5	5.6	5.0	6.7
	1999	4.9	6.6	4.0	5.0	4.9	5.4	8.4
	2000	4.9	3.5	4.9	3.4	4.7	5.6	6.5
Abortion Rate <sup>3</sup> (per 100 births)	1981	5.2	1.4	14.0	4.2	13.9	24.9	10.0
	1986	4.8	0.7	13.8	3.7	18.8	20.1	15.1
	1991	..	..	..	..	..	..	..
	1996	14.7	11.2	19.3	13.7	33.9	33.5	23.6
	1998	16.4	9.9	21.4	14.0	41.8	32.0	23.8
	1999	16.8	9.6	20.0	13.5	41.7	30.5	24.6
	2000	18.4	11.0	21.8	14.9	43.2	31.0	23.9

See notes at the end of this table.



**Summary Table. Principal Demographic Indicators, Canada, Provinces and Territories, 1981-2001 - Concluded**

	Year	Sask.	Alta	B.C.	Yuk.	N.W.T.	Nun.	Can.
Population Aged 65 + as a Percentage of the Total Population	1981	11.9	7.2	10.7	3.3	3.0 <sup>4</sup>	..	9.6
	1986	12.6	8.0	11.9	3.7	2.9 <sup>4</sup>	..	10.5
	1991	14.1	9.0	12.7	3.9	3.1	1.9	11.5
	1996	14.5	9.8	12.5	4.4	3.5	2.1	12.1
	1998 PD	14.5	9.9	12.8	4.9	3.9	2.4	12.3
	1999 PD	14.5	10.0	12.9	5.2	4.0	2.4	12.4
	2000 PR	14.5	10.1	13.0	5.5	4.2	2.5	12.5
	2001 PR	14.6	10.2	13.2	5.8	4.3	2.5	12.6
Total Age Dependency Ratio (in percentage) <sup>1</sup>	1981	73.3	57.4	58.6	53.4	77.9 <sup>4</sup>	..	59.8
	1986	70.7	56.2	57.4	50.3	69.0 <sup>4</sup>	..	56.3
	1991	73.8	58.1	57.7	47.5	56.2	86.0	56.8
	1996	72.5	57.7	55.9	47.2	56.9	84.2	57.1
	1998 PD	70.7	56.4	55.2	47.1	56.6	85.2	56.5
	1999 PD	69.6	55.6	54.7	46.9	56.4	84.2	55.9
	2000 PR	68.8	54.9	54.1	46.4	55.9	84.3	55.4
	2001 PR	67.9	54.1	53.6	45.4	55.2	83.0	54.8
Life Expectancy at Birth (in years) <sup>2</sup>	1981	M	72.5	72.2	72.8	..	..	72.0
		F	79.9	79.3	79.8	..	..	79.2
	1986	M	73.8	73.7	74.4	..	..	73.3
		F	80.5	80.2	80.7	..	..	80.0
	1991	M	75.2	75.1	75.3	..	..	74.6
		F	81.5	81.2	81.4	..	..	81.0
	1996	M	75.4	75.9	76.2	..	..	75.4
		F	81.4	81.3	81.8	..	..	81.2
	1998	M	75.6	76.5	76.9	..	..	76.0
		F	81.6	81.7	82.2	..	..	81.5
	1999	M	75.7	76.7	77.4	..	..	76.3
		F	81.6	81.8	82.5	..	..	81.7
	2000	M (P)	75.9	77.1	77.9	..	..	76.7
		F (P)	81.5	82.0	82.9	..	..	82.0
Infant Mortality Rate (per 1,000)	1981	11.8	10.6	10.2	14.9	21.5 <sup>4</sup>	..	9.6
	1986	9.0	9.0	8.5	24.8	12.0	26.6	7.9
	1991	8.2	6.7	6.5	10.6	7.7	18.0	6.4
	1996	8.4	6.2	5.1	0.0	4.9	20.1	5.6
	1998	7.1	4.8	4.2	5.1	17.6	19.5	5.3
	1999	6.3	5.8	3.8	2.6	12.1	14.9	5.3
	2000	6.8	6.6	3.7	2.7	8.9	12.4	5.3
Abortion Rate (per 100 births) <sup>3</sup>	1981	9.5	15.8	30.4	22.9	13.7 <sup>4</sup>	..	19.4
	1986	6.0	14.4	27.1	24.6	29.9 <sup>4</sup>	..	18.7
	1991	..	..	..	..	..	..	23.6
	1996	14.5	24.5	34.0	38.8	36.4 <sup>4</sup>	..	30.5
	1998	15.7	27.3	35.9	37.9	42.9 <sup>4</sup>	..	32.2
	1999	15.1	26.7	34.9	29.0	36.1	21.0	31.3
	2000	16.1	28.2	34.4	36.5	41.8	24.5	32.2

<sup>1</sup> Ratio between population aged 0-17 and those aged 65+ to those aged 18-64.

<sup>2</sup> Because of an absence of deaths in certain age groups, the mortality table could not be calculated.

<sup>3</sup> Provincial/territorial information of women who've had abortions in clinics were not available for 1991.

<sup>4</sup> Nunavut included.

**Note:** (P) Preliminary.

PD: Final postcensal estimates, PR: Updated postcensal estimates, ID: Final intercensal estimates, based on 2001 as of September 17, 2003.

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

## NUPTIALITY

The last analysis of nuptiality presented in this Report was published in the 1998-1999 edition, and focused on marriages and remarriages in 1997. This analysis focuses on changes in nuptiality in Canada and the provinces during the period 1998-2000.

After 1998, which saw a continuation of the downward trend that with rare exceptions was observed throughout the 1990s, *the year 1999 was characterized by an increase of 2,900 marriages, a rise of 1.9% compared with the previous year* (Table 2). The year 2000 brought a second consecutive increase in the number of marriages, changing the trend of the 1990s. The increase was more modest this time (1,700 marriages), at 1.1%. Annual upward variations of this size have not been seen since the 1980s. The history of the last two decades shows that fluctuations — even sizable ones — may be only short-term. Furthermore, *the gross marriage rate was 5.11 per 1,000 in 2000, the same level as in 1997* (Table A2, appended). *This means that the number of marriages grew no faster than the population.*

Running counter to the recent trend, the increase in 1998 and 1999 was slightly larger for first marriages (up 2%) than for remarriages, in which one or both of the spouses had already been married (up 1.7%). By contrast, between 1999 and 2000, almost all the increase in the number of marriages was in remarriages: while there were 1,700 more marriages in 2000 than in 1999, the number of marriages involving two single persons increased by only 300 or a mere 0.3%. Between 1999 and 2000, the number of marriages in which at least one of the spouses had already been married increased 3.0%, while the number in which the two spouses were remarrying rose 4.8%. As a result, *the proportion of marriages that were actually remarriages continued to rise and accounted for 34.7% of the whole in 2000*, a record high. In more than 45% of these remarriages, both spouses were entering into at least a second marriage, and that proportion too is continuing to rise. This increase in the proportion of remarriages is probably linked to the growing numbers of divorced men and women and the fact that the large cohorts of the baby-boom are reaching ages at which remarriage is more frequent. Figure 1 shows that the proportion of persons aged 45 and over who are legally separated or divorced increased between 1991 and 2001. The proportion of divorced persons has also increased from one cohort to the next, suggesting either that divorce is an increasingly common event for couples or that divorced persons are tending less to remarry.

The total first marriage rate is the proportion of people who, in a given year, would marry if they were to experience throughout their life the first

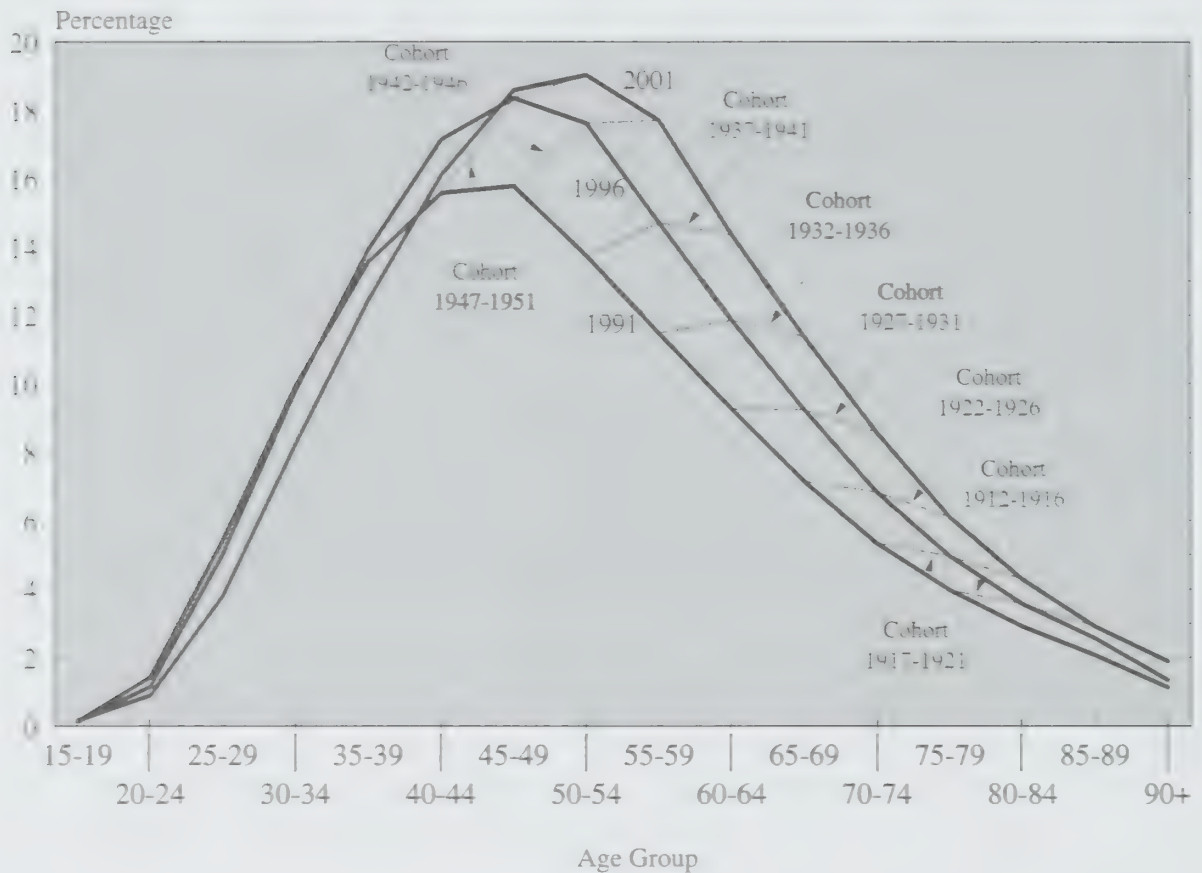
Table 2. Marriages, First Marriages and Remarriages, Canada, 1971-2000

Year	Number of Marriages	Number of First Marriages		Number and Proportion of Marriages in which at least one Spouse has been Previously Married		Number and Proportion of Remarriages in which both Spouses had been Previously Married	
		Males	Females	Number	Percentage	Number	Percentage
1971	191,324	168,944	169,072	31,698	16.6	12,934	40.8
1972	200,470	176,537	177,155	33,582	16.8	13,666	40.7
1973	199,064	173,355	174,135	36,047	18.1	14,591	40.5
1974	198,824	170,678	172,107	39,063	19.6	15,800	40.4
1975	198,085	167,022	168,817	42,300	21.4	17,031	40.3
1976	193,343	155,679	157,412	43,098	22.3	17,499	40.6
1977	187,344	154,906	156,854	44,750	23.9	18,178	40.6
1978	185,523	151,884	154,016	46,254	24.9	18,892	40.8
1979	187,811	152,731	154,982	48,309	25.7	19,600	40.6
1980	191,069	154,138	156,918	50,600	26.5	20,422	40.4
1981	190,082	151,978	154,506	52,340	27.5	21,340	40.8
1982	188,360	149,419	152,825	52,979	28.1	21,438	40.5
1983	184,675	144,960	147,968	53,342	28.9	22,080	41.4
1984	185,597	144,674	147,907	55,436	29.9	23,177	41.8
1985	184,096	144,009	146,718	54,632	29.7	22,833	41.8
1986	175,518	137,665	138,523	52,678	30.0	22,170	42.1
1987	182,151	138,454	139,324	60,106	33.0	26,529	44.1
1988	187,728	142,956	143,943	61,665	32.8	26,892	43.6
1989	190,640	145,733	146,242	62,276	32.7	27,029	43.4
1990	187,737	143,637	145,350	60,393	32.2	26,094	43.2
1991	172,251	131,996	133,584	55,278	32.1	23,644	42.8
1992	164,573	125,505	126,955	53,547	32.5	23,139	43.2
1993	159,317	121,104	122,479	52,406	32.9	22,645	43.2
1994	159,958	121,497	122,641	52,758	33.0	23,020	43.6
1995	160,251	121,312	122,131	53,477	33.4	23,582	44.1
1996	156,691	117,574	118,285	53,481	34.1	24,042	45.0
1997	153,306	115,186	115,875	52,217	34.1	23,334	44.7
1998	152,821	114,740	115,453	52,138	34.1	23,311	44.7
1999	155,742	116,982	117,767	53,020	34.0	23,715	44.7
2000	157,395	117,281	118,043	54,622	34.7	24,844	45.5

Source: Statistics Canada, Health Statistics Division.



**Figure 1. Proportion of Persons Divorced or Separated, by Age Group, Canada, 1991 to 2001**



**Sources:** Statistics Canada, censuses of Canada 1991, 1996 and 2001.

marriage rates observed at each age during the year. This indicator, although imperfect, has the advantage of not being affected by changes in the size of the population or its age structure. The recent trend in the total marriage rate shows that the perceptible rise in the number of marriages in 1999 or 2000 is not only due to changes in the size of the population. It also reflects a slight change in behaviour, since the rate increased for both men and women between 1998 and 1999, going from 505 per 1,000 to 516 per 1,000 and from 538 per 1,000 to 548 per 1,000 respectively (Table 3). On the other hand, the slight increase in the number of first marriages that was observed between 1999 and 2000 does not indicate an increase in the total rate. Behind this national average, however, there are different patterns from one province to another.

### Nuptiality in the Provinces

Most provinces saw the number of marriages increase between 1998 and 1999, except for Quebec and British Columbia, for which the increase occurred one year later (Table A2, appended). In 2000, Ontario, Manitoba, Saskatchewan

**Table 3. Total First Marriage Rate, Canada, Provinces and Territories, Selected Years 1976-2000 (for 1,000)<sup>1</sup>**

Province	1976	1981	1986	1991	1993	1994	1995	1996	1997	1998	1999	2000
	Males											
N.L.	755	653	589	600	546	592	629	607	630	650	711	715
P.E.I.	880	701	711	727	721	673	695	747	689	695	767	786
N.S.	743	686	595	575	547	559	566	586	557	566	607	620
N.B.	772	660	600	581	538	551	559	581	550	557	563	609
Que.	637	546	430	381	330	339	331	327	329	317	319	336
Ont.	756	692	623	610	568	572	584	579	567	567	582	566
Man.	767	722	615	600	592	592	607	582	572	593	623	600
Sask.	816	710	588	622	616	632	641	628	632	638	647	635
Alta.	765	644	566	597	592	604	611	569	565	571	573	563
B.C.	707	684	582	601	577	571	556	521	502	506	507	521
Y.T.	600	693	484	470	401	430	541	453	411	427	381	428
N.W.T. <sup>2</sup>	482	457	351	284	276	298	282	268	257	264	237	284
Nvt.	...	...	...	...	...	...	...	...	257	308	363	307
Canada	721	645	558	548	513	520	524	512	504	505	516	515
Can. less Que.	755	682	603	604	573	578	585	571	559	563	576	570
	Females											
N.L.	721	631	580	613	560	611	649	624	654	670	742	749
P.E.I.	828	668	742	730	733	711	734	782	718	726	760	783
N.S.	736	672	631	606	574	582	592	597	582	579	622	625
N.B.	760	649	626	608	570	574	594	618	587	591	601	654
Que.	640	560	442	427	370	380	370	363	362	350	352	371
Ont.	745	685	658	653	609	609	618	609	597	599	613	596
Man.	748	712	660	651	638	637	657	626	610	635	654	636
Sask.	787	698	628	656	648	663	665	653	653	645	663	643
Alta.	768	689	616	643	634	652	649	613	607	614	616	602
B.C.	711	695	623	661	627	629	607	563	540	538	537	549
Y.T.	634	715	573	521	464	464	543	486	422	467	469	423
N.W.T. <sup>2</sup>	561	474	399	311	309	333	315	282	312	294	256	302
Nvt.	...	...	...	...	...	...	...	...	281	351	383	354
Canada	715	651	589	594	555	562	563	548	539	538	548	547
Can. less Que.	746	685	640	648	614	619	623	605	592	595	608	600

<sup>1</sup> Males age 17-49 and females age 15-49.

<sup>2</sup> Nunavut included from 1976 to 1996.

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

and Alberta saw decreases in the number of marriages. However, these decreases were small, and the trend in these provinces can be analysed more precisely using the total rate.

In Quebec and the Atlantic provinces, the trend in the total first marriage rate in the past two years is clearly upward. Newfoundland and Labrador and Prince Edward Island have the highest nuptiality in Canada, with the total rate in 2000 reaching a level not equalled in 20 years (it was practically 800 per 1,000 in Prince Edward Island). Quebec had the lowest rate of all provinces. This is not surprising, given the popularity of common-law unions in that province. *According to marriage rates observed in 2000, roughly one-third of single persons in Quebec will marry over the course of their life, whereas more than two-thirds will do so in Newfoundland and Labrador or Prince Edward Island.*

After Quebec, the lowest rates are found at the other end of the country, in British Columbia, as has been the case for many years. As in Eastern Canada, the trend in British Columbia is upward. In the Prairies and in Ontario, the increase observed between 1998 and 1999 was entirely offset by a decrease that was equally large — even larger in some cases — the following year, with the result that nuptiality in 2000 fell to its lowest level in 20 years in Ontario and Alberta.

Nuptiality in the three territories was lower than elsewhere (indeed, in the Northwest Territories it was the lowest in Canada, exceeding even Quebec), and the variations are greater owing to the small numbers involved. In general, the recent trend is upward in the Northwest Territories and slightly downward in Yukon.

### **Common-law Unions Increasingly Popular**

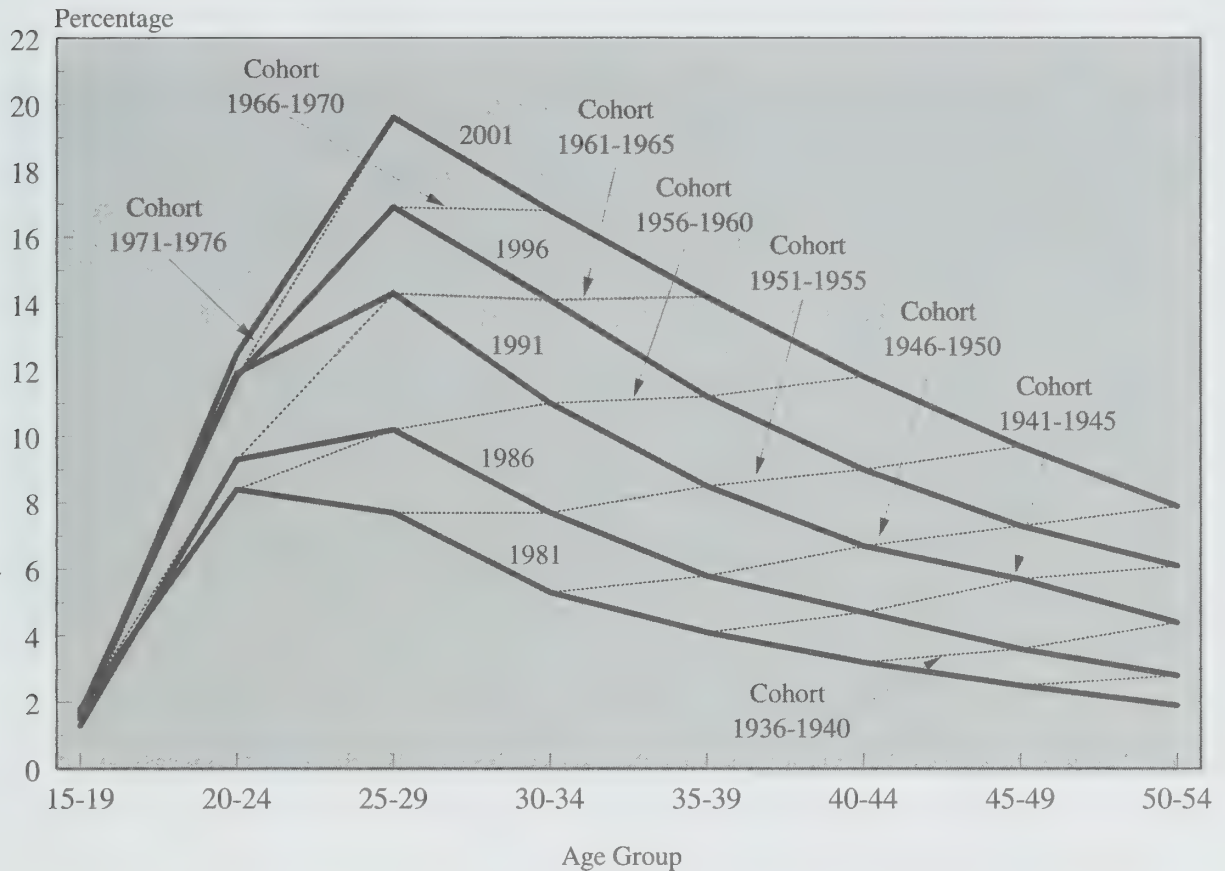
Whereas common-law unions grew rapidly in Quebec during the 1980s, they gained considerably in popularity in the rest of Canada during the 1990s. Data from the 2001 Census reveal just how widespread this relatively recent phenomenon is.

Figure 2 shows the proportion of persons living in common-law relationships by age group for all censuses since 1981. It appears that *common-law unions continued, in 2001, to gain in popularity, since the proportion of persons living this lifestyle had increased by roughly 3% since the previous census.* For example, nearly 17% of individuals between 25 and 29 years of age were living in common-law relationships in 1996; nearly 20% were doing so in 2001. Between 1981 and 2001, the percentage more than doubled.

Common-law unions are also increasingly popular from one cohort to the next. Less than 6% of individuals born between 1946 and 1950 were living in common-law relationships when they were between 30 and 34 years of age. At the same ages, the proportion was nearly three times higher



**Figure 2. Proportion of Persons Living in Common-law Unions, by Age Group, Canada, 1981 to 2001**



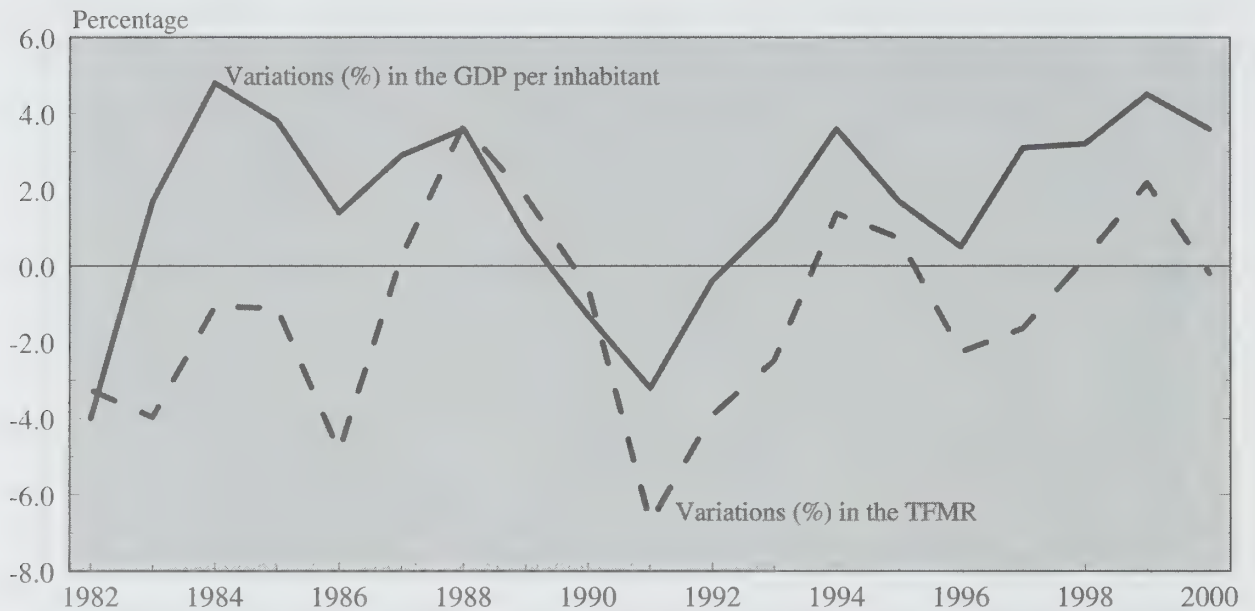
**Sources:** Statistics Canada, censuses of Canada 1981, 1986, 1991, 1996 and 2001.

(approximately 17%) for the cohort of persons born between 1966 and 1970. For cohorts born before 1960, the proportion of persons living in common-law relationships increases from one age group to the next, indicating that many people are choosing this lifestyle instead of remarriage after a divorce. For those born after 1960, the maximum proportion of persons living in common-law relationships appears to be reached toward the age of 25 to 29.

### Nuptiality and Economic Cycles

Beyond the obvious effect of the growing popularity of common-law unions, an analysis of how Canadian nuptiality has evolved over the past twenty years suggests that it is also somewhat associated to economic cycles. A hypothesis can be made that young people's confidence in the future — probably a major factor in the decision to marry — is largely influenced by current economic conditions. Figure 3 puts this hypothesis to the test, since it shows percentage changes in two indicators: the total first marriage rate (TFMR) and per capita gross domestic product (GDP), calculated in constant 1997 dollars.

**Figure 3. Variations (in %) of the Total First Marriage Rate and the Gross Domestic Product per Inhabitant (in Constant 1997 dollars), Canada, 1982-2000**

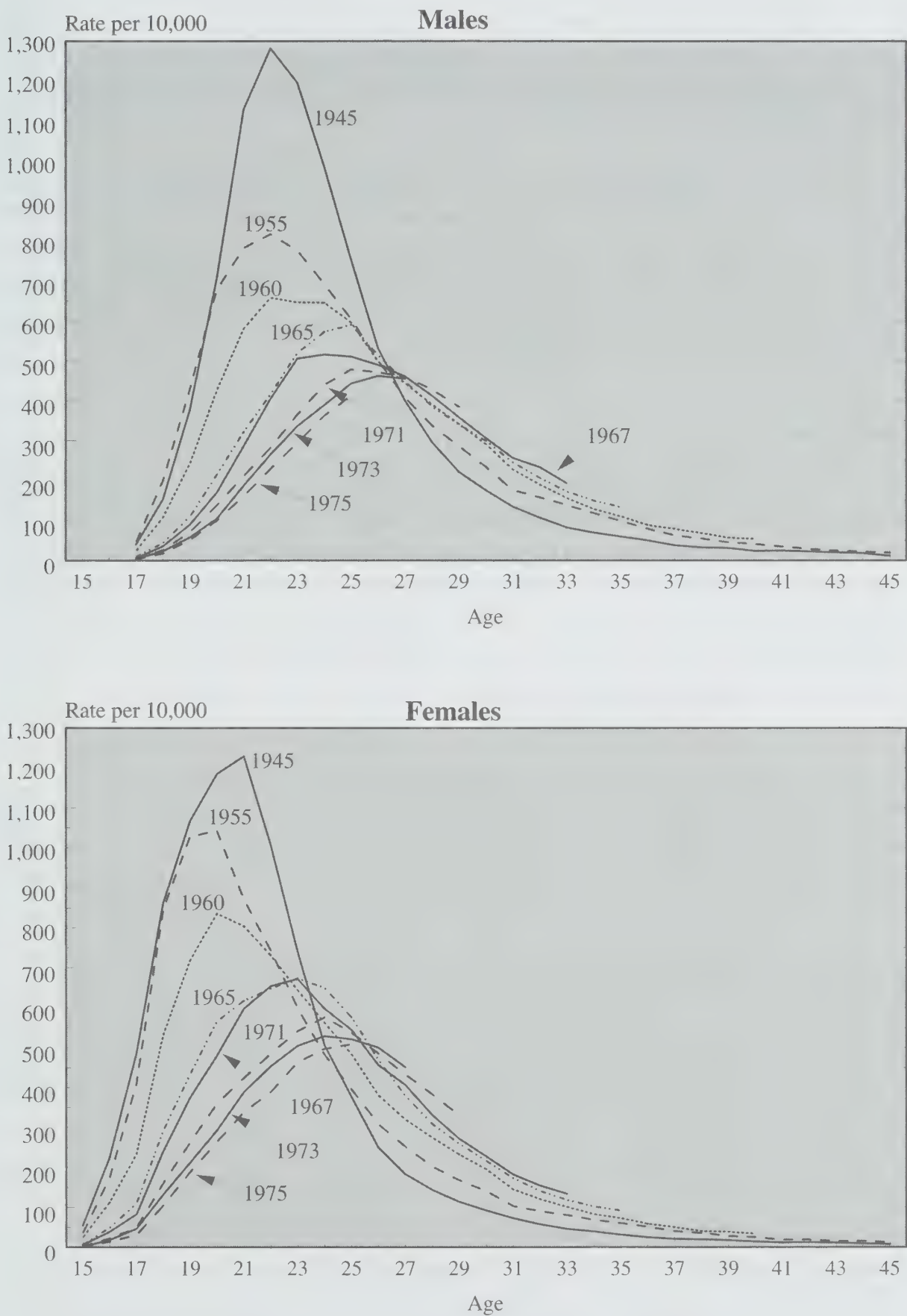


**Sources:** Statistics Canada, Demography Division and CANSIM II, matrix 384-0013.

The two indicators have evolved along similar lines in the past twenty years. The inflection points between periods of upward or downward change on the two curves generally correspond except for a single year, 1983. From 1982 to 1987, the total first marriage rate consistently declined; however, the economic recovery of 1984 and 1985 appears to have had an effect on it, since the negative change observed in 1984 and 1985 was much smaller than that observed at the start of the decade. It would appear that the systematic decrease in the total first marriage rate in the first half of the 1980s is linked to the rise of common-law unions, which made marriage less popular with young adults.

Since 1991, upward or downward shifts in gross domestic product have had an almost identical effect on changes in the total first marriage rate: not only do the inflection points correspond, but the slopes of the two curves are similar. The record of the 1990s shows that in a period of prosperity, nuptiality is generally on the rise. By contrast, periods of recession such as the one that Canada experienced in the early 1990s are generally accompanied by a drop in nuptiality. Indeed, in 1991, the total first marriage rate showed its strongest negative variation in recent history, as did gross domestic product.

Figure 4. First Marriage Rates by Sex, Canada (Some Recent Cohorts)



Source: Table A3, appended.



### **Nuptiality of Single Persons within Cohorts**

Figure 4 shows the age-specific marriage rates of single persons for selected cohorts of Canadian men and women. As may be seen, the marriage rate of men and women born in 1945 increased until approximately 22 years of age, peaking at nearly 1,300 marriages per 10,000 single persons. Marriage rates then fell, mainly owing to the decline in the number of single persons available for marriage.

Not only do Canadian men and women born in 1975 have the lowest nuptiality thus far, but they are also tending to marry later in the life cycle. Thus, the average age at the first marriage continues to edge up from one cohort to the next. The only constant between old and new cohorts is the gap between the sexes, with single men marrying, on average, two years later in their life than single women.

### **Conclusion**

The increase in the number of marriages observed in most provinces and territories from 1998 to 2000 may be only short-term. Common-law unions continue to grow in popularity at all ages. Between 25 and 29 years of age, nearly one person in five in Canada is living in a couple relationship without being married.

## DIVORCES

The last analysis of divorce in Canada and the provinces, published in the 2000 edition of this report, concerned divorces registered during 1998. Since then, statistics on two new years, 1999 and 2000, have been made available. This section therefore focuses on how divorce evolved during the most recent two-year period.

*The number of divorces increased 2.6% between 1998 and 1999* in Canada, representing an additional 1,800 divorces (Table A4, appended). In 2000, the upward trend continued for a third consecutive year, but only at a reduced rate of 0.3%, or 230 more divorces. *In 2000, there were 71,100 divorces in Canada, compared to just over 67,000 in 1997.* It should be noted that the number of marriages was also up in 1999 and 2000 (see chapter on marriage), but the number of divorces does not necessarily fluctuate along with the number of marriages: in 1998, the number of divorces rose while the number of marriages declined.

Despite the recent upturn, the trend of the past decade is downward especially from the peak of 80,000 in 1989. What we are witnessing then, is some stabilization, with fairly sizable annual variations. These variations result more from the time it takes for the courts to confirm marriage dissolutions than from behavioural changes within the population.

The crude divorce rate went from 22.8 divorces per 10,000 inhabitants in 1998 to 23.2 per 10,000 in 1999, and then to 23.1 per 10,000 in 2000 (Table 4). By comparison, it had reached 36.4 per 10,000 in 1987. The current variations are therefore minor ones, and the trend is downward over a ten-year period.

The 1999 increase in the number of divorces had little effect on the average duration of the marriage for persons divorced that year. This indicator went from 10.8 years in 1998 to 10.9 years in 1999 (Table A4, appended) and remained stable in 2000. Moreover, there were few variations in the indicator during the 1990s, when it fluctuated by no more than 0.4 year.

### Divorce in the Canadian Provinces

Between Canada's provinces the variations are greater, and *in general the crude divorce rate rises from east to west across the country.* In the Atlantic provinces, where the divorce rate is generally lower than elsewhere in Canada, the annual variations are relatively larger, owing to the small numbers involved. First, in Newfoundland and Labrador and Prince Edward Island,

Table 4. Crude Divorce Rate (per 10,000), Canada and Provinces, 1980-2000

Year	New-foundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1980	9.69	13.17	27.13	18.78	21.36	25.66	22.06	18.98	34.57	34.50	25.30
1981	9.90	15.11	26.74	18.89	29.31	24.60	23.15	19.80	36.69	33.76	27.26
1982	10.88	16.55	26.52	23.48	28.24	26.50	22.85	18.38	37.50	35.38	28.04
1983	12.27	17.14	26.92	27.15	26.30	25.52	24.90	19.96	36.64	32.17	27.03
1984	10.17	15.40	25.80	19.79	25.40	23.59	24.36	19.58	35.37	30.51	25.45
1985	9.68	16.68	26.40	18.79	23.72	22.43	21.37	18.79	33.72	28.01	23.98
1986	11.92	15.50	29.34	23.84	28.36	29.19	27.32	24.09	39.31	37.61	30.00
1987	19.42	21.39	30.88	27.41	32.58	40.53	35.73	28.74	39.15	39.95	36.37
1988	15.76	20.81	27.79	22.91	29.74	33.04	28.15	24.33	35.62	34.54	31.16
1989	17.44	19.06	27.96	22.43	28.62	30.96	26.39	24.14	33.00	33.32	29.68
1990	17.58	21.53	26.59	22.96	29.23	28.13	25.31	23.47	33.32	29.69	28.33
1991	15.74	20.64	24.92	22.16	28.70	26.56	25.14	22.34	32.35	30.73	27.48
1992	14.94	17.34	25.06	21.82	27.69	28.82	23.87	23.16	31.19	30.06	27.85
1993	16.03	17.15	25.72	21.43	27.44	27.04	23.12	22.24	32.25	30.49	27.25
1994	16.23	18.63	24.68	20.91	25.29	28.37	24.43	23.31	30.22	31.06	27.17
1995	17.29	19.29	24.73	19.37	27.80	26.77	23.70	22.88	27.74	27.37	26.45
1996	18.91	17.40	23.93	19.26	24.85	22.55	22.95	21.74	27.00	28.07	24.11
1997	14.84	17.76	21.22	18.20	23.93	21.00	23.10	21.51	25.32	24.48	22.48
1998	17.31	20.38	20.65	19.55	23.10	22.08	21.47	21.91	26.38	24.59	22.84
1999	16.49	21.12	20.76	22.12	23.32	22.63	22.51	21.81	26.80	24.66	23.24
2000	16.97	19.66	21.80	22.72	23.10	22.35	21.20	21.47	27.16	24.67	23.11

Sources: Statistics Canada, Health Statistics Division and Demography Division.



variations in the number of divorces from 1998 to 2000 were very small. The crude divorce rate nevertheless declined slightly in these two provinces, which already had the lowest divorce rates in Canada. Both provinces had registered the largest increases between 1997 and 1998, an indication of the magnitude of variations where the numbers are so small. The average duration of the marriage for persons who divorced in 2000 in Prince Edward Island was 12.1 years, down from 12.7 years in 1998. This brought it in line with the average over the last decade in this province, and also with the Canadian average.

On the other hand, Nova Scotia and New Brunswick saw their divorce numbers rise significantly during the period studied. While the increase was modest in Nova Scotia (6.3%, or 120 additional divorces), it was larger in New Brunswick, reaching 16.6% (240 divorces). This almost brought that province back to the level observed in 1986, when a sizable increase in divorce was observed throughout Canada after amendments were made to the Act in 1985. Both these provinces also saw a rise in their crude divorce rate. The increase was larger in New Brunswick, where the rate rose from 19.6 divorces per 10,000 inhabitants in 1998 to 22.7 per 10,000 in 2000, a rise of 16.2%. At no time in the past ten years had the number of divorces and the crude divorce rate been at this level in New Brunswick.

There were few changes in Quebec and Ontario between 1998 and 2000. Despite a rise in the number of divorces in both provinces between 1998 and 1999, the crude rate in 2000 was the same as in 1998 in Quebec and was up only slightly in Ontario. In Quebec, the number of divorces in 2000 was, after the number registered in 1998, the second lowest in 15 years. This indicates the continuation of an overall downward trend that might be related to the growing importance of common-law unions as a form of conjugal living in that province. Like the crude divorce rates, the average duration of the marriage for persons who divorced remained nearly unchanged between 1998 and 2000 in both these provinces. However, Quebec was joined by Saskatchewan in 2000 as the province with the shortest average duration of marriage, namely 10.5 years.

Among the three Prairie provinces, only Alberta experienced a major increase in the number of divorces. In Manitoba, the increase observed between 1998 and 1999 was almost entirely offset by the decrease observed the following year, and in Saskatchewan the changes were not significant. In Alberta, the number of divorces increased by 510, or 6.6%, between 1998 and 2000. However, the crude rates of the three provinces varied only slightly, even in the case of Alberta, suggesting that the increase in the number of divorces in that province mirrored the rapid growth of its population. As in the past, Alberta's crude divorce rate continued to be the highest in Canada, with 27.2 divorces per 10,000 inhabitants in 2000.

British Columbia saw the number of divorces rise between 1998 and 2000. However, this increase of 190 divorces was not large, and both the crude

rate and the average duration of marriages ending in divorce remained almost unchanged at around 24.6 divorces per 10,000 inhabitants and 10.7 years respectively, indicating that the behaviour of the population was little changed in this regard.

### **Total Divorce Rate**

The total divorce rate represents the proportion of marriages which, within a fictitious marriage cohort, would end in divorce if the divorce rates calculated according to duration of marriage for a given calendar year were to apply to this cohort. This indicator is obtained by summing divorce rates per duration of marriage. It therefore takes account of annual variations in the number of marriages. Like the total fertility rate, it is a period measure of the intensity of the phenomenon. Just as there is no direct relationship between the total fertility rate and the completed fertility rate of cohorts, no marriage cohort will experience exactly the intensity measured by the total divorce rate, because from year to year the rates move upward or downward. Nevertheless, it gives an estimate of the proportion of marriages that would end in divorce if the situation observed in a given year were to prevail for a marriage cohort.

However, the total divorce rate is affected by two biases due to mortality and migration. Following the death of their spouse, widowers and widows are no longer at risk of divorcing, which results in the rates being underestimated. Also, divorces are registered in the province in which they were decreed, whereas the marriage may have taken place either in another province or abroad. Thus, owing to the effect of migration, rates may be overestimated where net migration is positive or underestimated where net migration is negative.

*In 2000, the total divorce rate was 3,548 divorces per 10,000 marriages* (Table A5, appended), meaning that if, for the next 25 years, divorce rates per duration of marriage were exactly the same as those observed in 2000, 35.5% of marriages would end in divorce. While this indicator has been rising since 1997, it is still lower than in 1986 and 1995. Figure 5 shows that most of the increase since 1997 appears to be attributable to an increase in divorce rates for recent marriages (marriage durations of five years or less) and relatively old marriages (durations of 15 years and over).

### **Conclusion**

It is difficult to conclude that divorce in Canada is on the rise in light of the pattern observed over the past two years. The variations at the national level are minor, and they could be due merely to the timing of court discussions. The number of divorces registered in a given year depends on various administrative factors such as the number of petitions filed, the courts' availability to deal with these petitions and the speed of processing of these petitions through to a decree absolute.

**Figure 5. Duration-specific Divorce Rates for Various Durations of Marriage, by Year of Divorce and Total Divorce Rate, Canada, 1969-2000**



**Source :** Table A5, appended.

It is even more difficult to judge how conjugal life in Canada is evolving solely in light of divorce statistics. These do not cover dissolutions of common-law unions, a mode of conjugal living that is becoming increasingly common. As a result, divorce statistics significantly underestimate the actual number of union dissolutions in Canada.



## BIRTHS AND FERTILITY

*In 2000, there were 327,900 births in Canada, some 9,400 less than in the previous year* (Table A6, appended). *This was a decrease of 2.8%, the third largest annual decline in the past decade.* Between 1990 and 2000, the annual number of births declined consecutively from 404,700 in 1990 to 327,900 in 2000, a drop of 19%.

The reduction in births is partly attributable to the aging of the population, with the large cohorts of the baby-boom gradually moving out of their fertile years. Part of the drop is also attributable to changes in the reproductive behaviour of the Canadian population. Thus, the total fertility rate — that is, the average number of children that 1,000 women would have if, throughout their reproductive life, they had the fertility observed in a given year — has been falling steadily for nearly a decade. In 2000, the total fertility rate was 1,488 children per 1,000 women, the lowest rate ever recorded. According to the fertility rate observed in 1990, 1,000 Canadian women would have an average of 1,710 children. Thus, in ten years, the fertility rate of Canadian women declined by 13%.

### Births and Fertility Declined in All Provinces

*The number of births declined in all provinces between 1999 and 2000.* The decline was especially large in the Atlantic provinces, with drops of 4.9% in Prince Edward Island, 4.8% in Nova Scotia, 3.7% in Newfoundland and Labrador, and 3.5% in New Brunswick. These were all substantially above the national average of 2.8%.

Except for Manitoba, the Western provinces recorded declines above the national average. The number of births fell by 3.7% in Saskatchewan, 3.1% in Alberta and 3.0% in British Columbia. A drop of 3,700 births (2.8%) was observed in Ontario; in relative terms, this was similar to the decrease observed in Canada as a whole. Quebec, with a 2.2% decline in births, and Manitoba, with a 1.6% decline, were the only provinces with decreases smaller than for Canada as a whole.

In most provinces, births declined more than fertility, with the number of births falling more rapidly than the total fertility rate. And yet between 1999 and 2000, everywhere but in Newfoundland and Labrador and Saskatchewan, the population increased. This should have somewhat slowed the decrease in the number of births in relation to the decrease in the total

fertility rate. In other words, the decline in the number of births is now increasingly related to the aging of the population, which reduces the proportion of women in their reproductive years.

In Ontario and Alberta, unlike elsewhere in Canada, the total fertility rate fell more rapidly than the number of births. This was because these two provinces have benefited from more rapid population growth than the Canadian average as a result of gains through migration. Their strong population growth, and more especially a major influx of young people in their reproductive years, served to slow the decline in births.

**Total Rate by Birth Order**

Not only was the decline in fertility observed in all provinces, but it also affected almost all birth orders in nearly equal proportions. Between 1999 and 2000, the total fertility rate fell 2% to 3% for first, second and third births (Table A7, appended). While the decrease in the rate was smaller for fourth births, and while a slight increase was observed for fifth and higher births, the fertility rates were negligible for those birth orders; they accounted for only about 7% of the total fertility rate.

In fact, for some 20 years, annual changes in fertility have affected all birth orders in similar proportions, as Table 5 shows. As may be seen, the proportion of first births held steady at around 45% of the whole and the proportion of second births at around 35%, while third and higher births accounted for approximately 20% of the total.

**Change in Rates by Age**

For a number of years now, as in many industrialized countries, the fertility tempo of Canadian women has tended to slow down: the average age at maternity is rising. From one year to the next, the fertility of young women — those under 30 years of age — is decreasing, while a slight increase in fertility is

**Table 5. Trends in the Percentage Distribution of Total Fertility Rates by Birth Order, Canada, 1980, 1985, 1990, 1995 and 2000**

Year	First Order	Second Order	Third Order	Fourth Order	Fifth Order +
1980	43.7	34.8	14.8	4.4	2.4
1985	43.5	35.4	14.6	4.4	2.1
1990	45.4	34.2	14.1	4.2	2.1
1995	44.8	34.8	13.8	4.3	2.3
2000	45.3	34.8	13.3	4.2	2.5

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

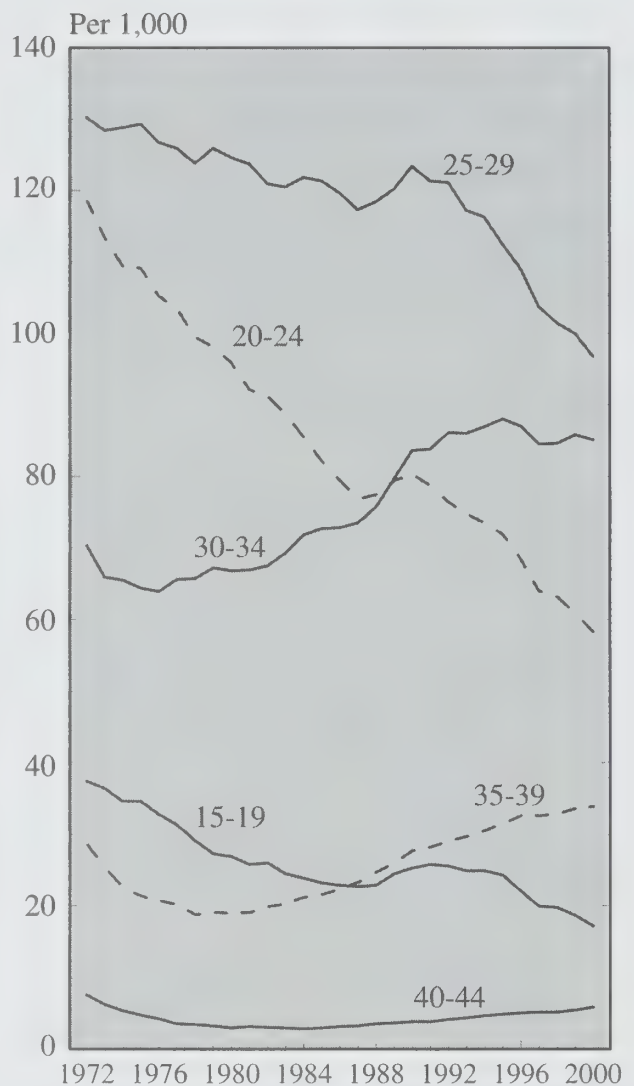
observed among women 30 years of age or older. This trend is illustrated in Figure 6, which shows how fertility rates by age group have evolved over nearly 30 years.

*The fall in fertility rates was especially sizable for women aged 20 to 24. Their fertility rate dropped below the level of 60 per 1,000 for the first time in 2000. In the early 1970s, the rate was approximately 120 per 1,000. It is now 58.7 per 1,000 and has thus decreased by more than half in less than 30 years.*

In 2000, the fertility rate of women aged 25 to 29 declined 3.2%, and for the first time fell below the threshold of 100 per 1,000. Since the start of the 1990s, the drop in fertility among women aged 25 to 29 has accelerated, almost catching up to that of the younger group. Between 1990 and 2000, the fertility of women aged 25 to 29 decreased 22%, going from 123 per 1,000 to 97 per 1,000, compared to a decrease of 27% among women aged 20 to 24, from 80 per 1,000 to 58 per 1,000. In the previous decade, the fertility rate of women aged 25 to 29 remained nearly stable, ranging between 117 and 125 per 1,000, whereas the rate for women aged 20 to 24 declined 16%, gradually falling from 96 per 1,000 to 80 per 1,000.

Beyond age 30, fertility has been rising for approximately a quarter century. In 1989, the fertility of women aged 30 to 34 exceeded that of women ten years younger. After rising rapidly from the early 1980s to the mid-1990s, the increase in the fertility of women in their early thirties has slowed in recent years. Between 1990 and 2000, the fertility rate of women aged 30 to 34 rose by only 1 per 1,000 to reach 85 per 1,000. While the increase in fertility has slowed among women aged 30 to 34, it is continuing at a nearly constant rate among women aged 35 to 39. The fertility rate of women aged 35 to 39 went from 28 per 1,000 to 34 per 1,000 during the same period. In the former case, this was an increase of less than 2%, whereas for the older age group,

**Figure 6. Fertility Rate by Age Group, Canada, 1972-2000**



**Sources:** Statistics Canada, Health Statistics Division and Demography Division.



the increase was 23%. Since the initial level of the fertility rate of women aged 35-39 was low, a relative increase — even a large one — has little effect on either the total fertility rate or the completed fertility rate of these women.

In 2000, the fertility rate for women aged 30 to 34 was down slightly from 1999. There is every indication that the fertility of women in this age group is levelling off. It might have seemed that the decrease in fertility observed among these women when they were in their twenties meant that they were postponing those foregone births to later in life. However, this might not be the case, since fertility beyond age 35 is too low to make up the difference. Instead, there will likely be a decrease in the completed fertility rate of the women in these cohorts.

### **Average Age at Maternity**

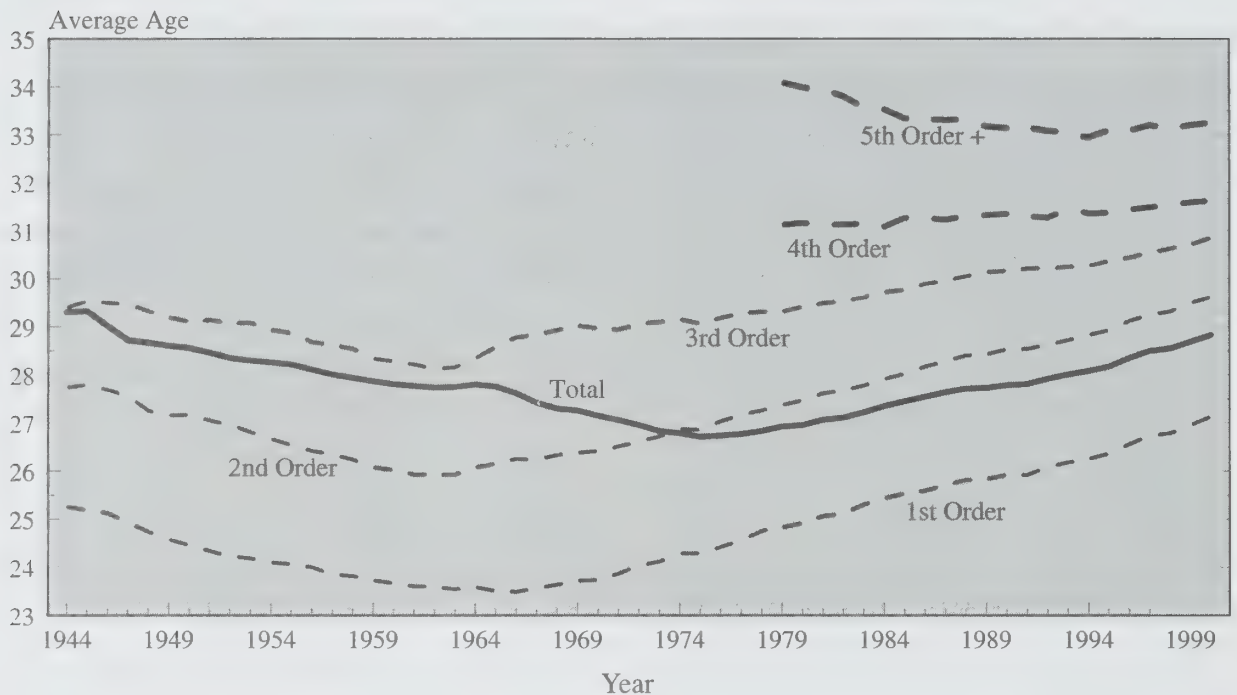
Mothers' age at the birth of their children is increasing. The average age at maternity went from 26.7 years in 1976 to 28.8 years in 2000 (Figure 7). This increase of approximately two years in the age at maternity over nearly a quarter of a century would have been even larger had it not been for the concomitant reduction in the average number of children per family. During the same period, the average age at the first and second births increased by 2.7 years and 2.6 years respectively. The average age at the first birth went from 24.4 years to 27.1 years, and the average age at the second birth, from 27.0 years to 29.6 years.

### **Completed Fertility Rate of Cohorts**

Much importance — sometimes too much — is assigned to annual variations in the total fertility rate. In fact, by its nature, the total fertility rate can vary merely because of year-to-year changes in conditions affecting fertility. Indeed, even a systematic decrease or increase, year after year, may, at least for a short period, merely be the result of a change in the fertility tempo. That is, it may be due to an increase or decrease in the age at which women have their successive births, without there being a corresponding change in the actual number of children that a given cohort of women will bring into the world. If too much importance is assigned to the change in the total rate, this is because it summarizes in a single figure all the fertility rates by age for a given year. The other aggregate fertility indicator — the completed fertility rate — can truly be measured only for cohorts of women who have completed their reproductive years.

The total fertility rate is therefore a period measure and corresponds to the fertility rate for a given year. However, it is too often interpreted as being the number of children that women have actually had, or the number that they will have, ignoring the hypothesis that this will be true only if throughout their reproductive life, women experience the rates observed at each age that

**Figure 7. Average Age at Maternity by Birth Order, Canada, 1944-2000**



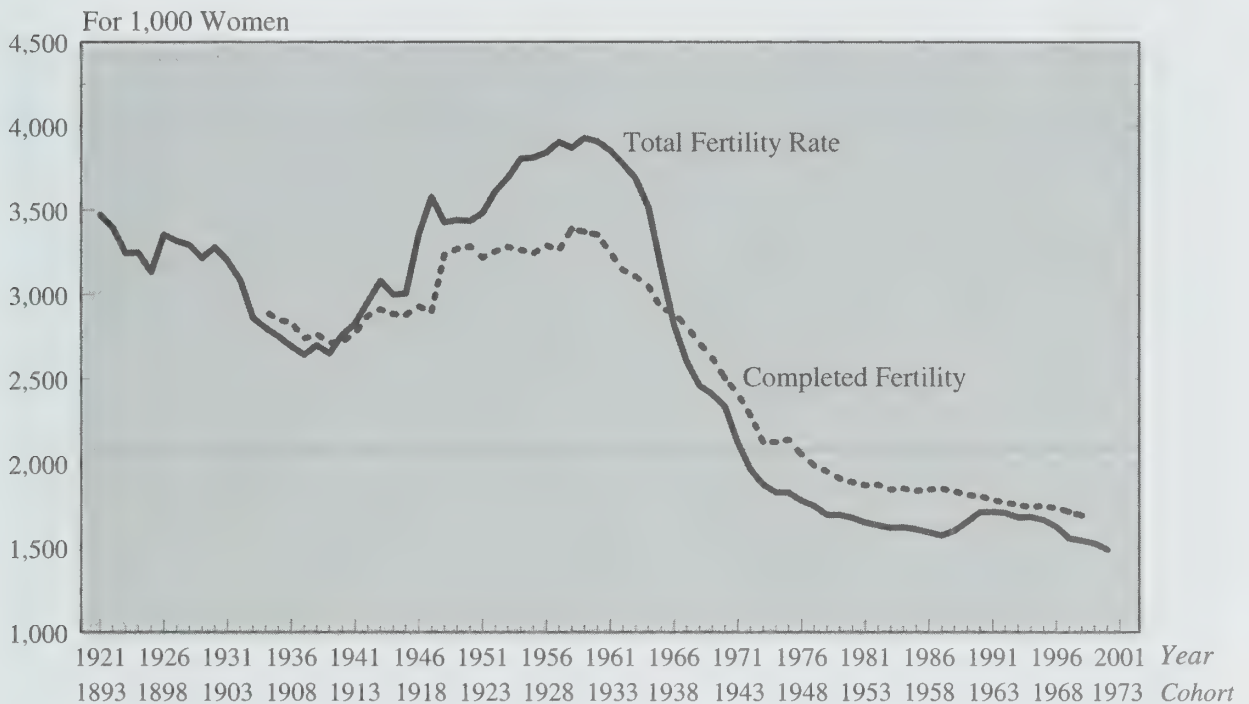
**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

particular year. This hypothesis is very seldom borne out, as may be seen from Figure 8, which compares the change in the total fertility rate and the completed fertility rate of corresponding cohorts.<sup>1</sup> During the baby-boom, the total rate greatly exceeded the completed fertility of the corresponding cohorts because it was, in part, swelled by the acceleration of the tempo. By contrast, since the late 1960s, the completed fertility rate of the cohorts has been greater than the corresponding total fertility rate. Another observation is that the slight recovery in fertility indicated by the change in the total fertility rate in the early 1990s had no effect on the downward trend in completed fertility, which is still continuing.

An examination of Figure 9 suggests that the decline in the completed fertility rates of cohorts of women who have not yet completed their reproductive period, including younger cohorts, could continue. This figure shows fertility rates by age for several cohorts of Canadian women. As may be seen, from one cohort to the next, fertility rates at a given age decline almost systematically before age 28. Beyond that age, fertility rates tend to increase from one cohort to the next. However, the increase is much smaller than the decrease that

<sup>1</sup> The curve representing the completed fertility rate is shifted by 28 years, the average age at maternity, to correspond to the period rate.

**Figure 8. Total Fertility Rate, 1921-2000 and Completed Fertility, 1906-1970, Canada**



**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

occurred when these women were younger, as shown by the smaller area between the curves after age 28 compared to the area between the curves for these cohorts at younger ages. As a result, the completed fertility rate falls steadily.

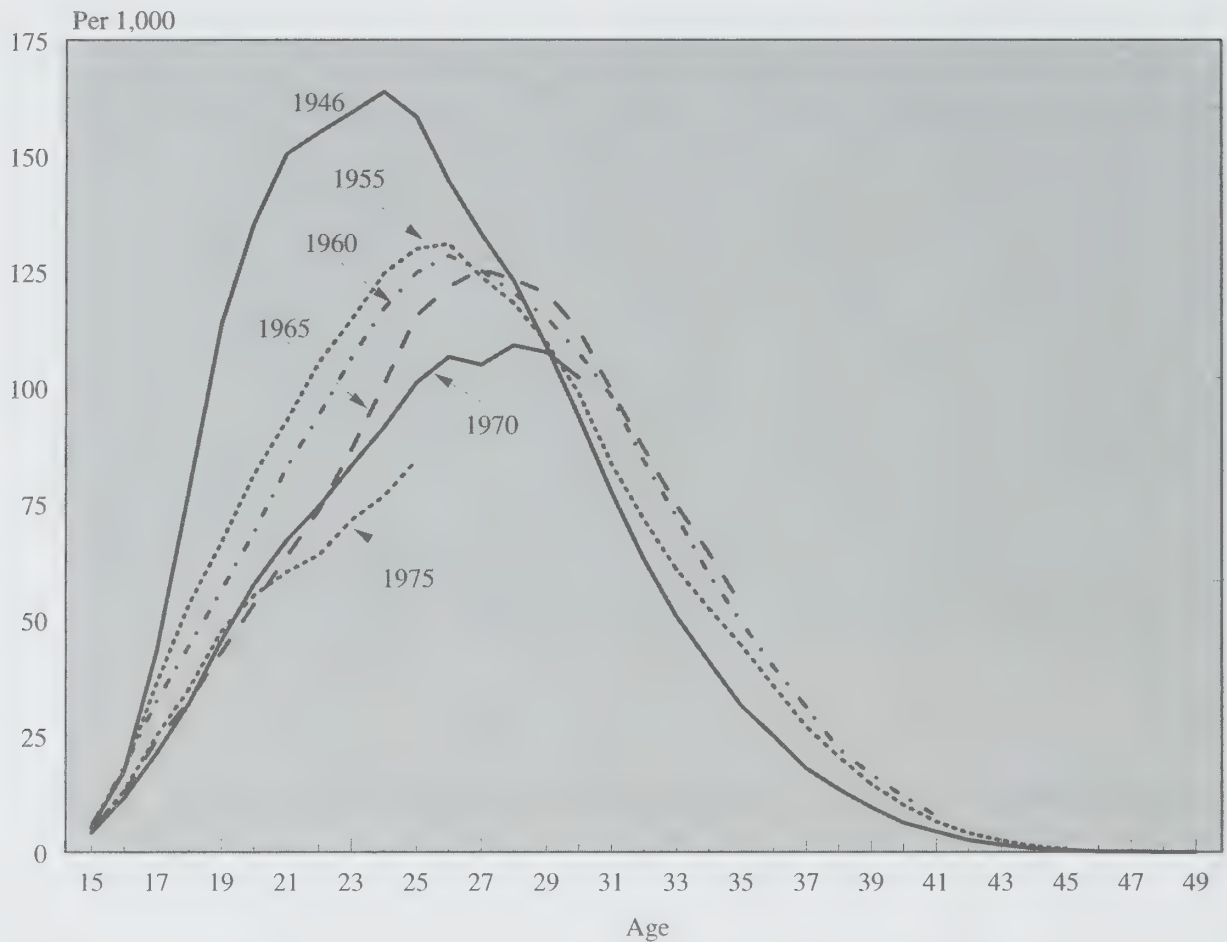
Since fertility is relatively low after age 30, the completed fertility rate of the cohort of women born in 1970 can be predicted fairly precisely. It would reach 1,691 children per 1,000 women if the upward trend in fertility beyond the thirtieth birthday continued, whereas it would reach 1,644 children per 1,000 women if the rates by age beyond age 30 instead stabilized at the level observed in 2000.

Another observation from Figure 9 is that the fertility rates of the most recent cohort shown, namely women born in 1975, are considerably lower between ages 20 and 25 than those of women in the 1970 cohort. In fact, the cumulated fertility rate at age 25 is 588 children per 1,000 women for those born in 1970 and 537 per 1,000 women in the 1975 cohort.

This gap could be difficult to fill, since fertility rates beyond age 30 tend to stabilize. Thus, little difference is observed after age 30 between the fertility rates of women born in 1960 and those born in 1965. However, for the latter group, the cumulated fertility rate at age 30 was considerably lower than for



Figure 9. Fertility Rate by Age for Selected Cohorts, Canada



Sources: Statistics Canada, Health Statistics Division and Demography Division.

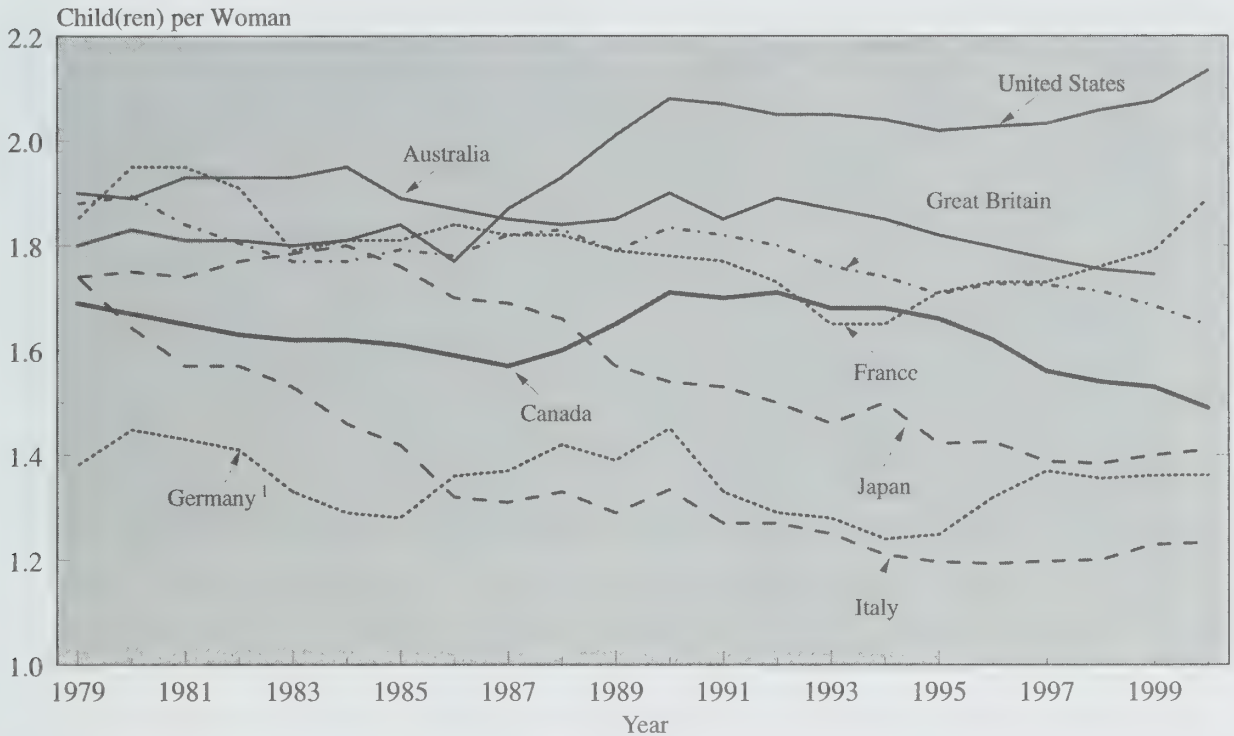
the former group, at 1,213 children per 1,000 women compared to 1,323 children per 1,000 women. This could indicate that the completed fertility rate will decline steadily for a few more cohorts.

### Comparison with Other Selected Industrialized Countries

Except for France and the United States, which stand out from other countries by their relatively high fertility level, the general trend in fertility remains downward in industrialized countries (Figure 10). Even so, *fertility in Canada is now more like that in countries with very low fertility* — Spain (1.24 children per woman), Italy (1.23 children per woman), Germany (1.36 children per woman) and Japan (1.41 children per woman) — *than the fertility rate observed in France or the Anglo-Saxon countries*.

In the United States, fertility rose in the second half of the 1980s, reaching two children per woman by 1989. Since then, the U.S. rate has remained

Figure 10. Total Fertility Rate for Selected Industrialised Countries, 1979-2000



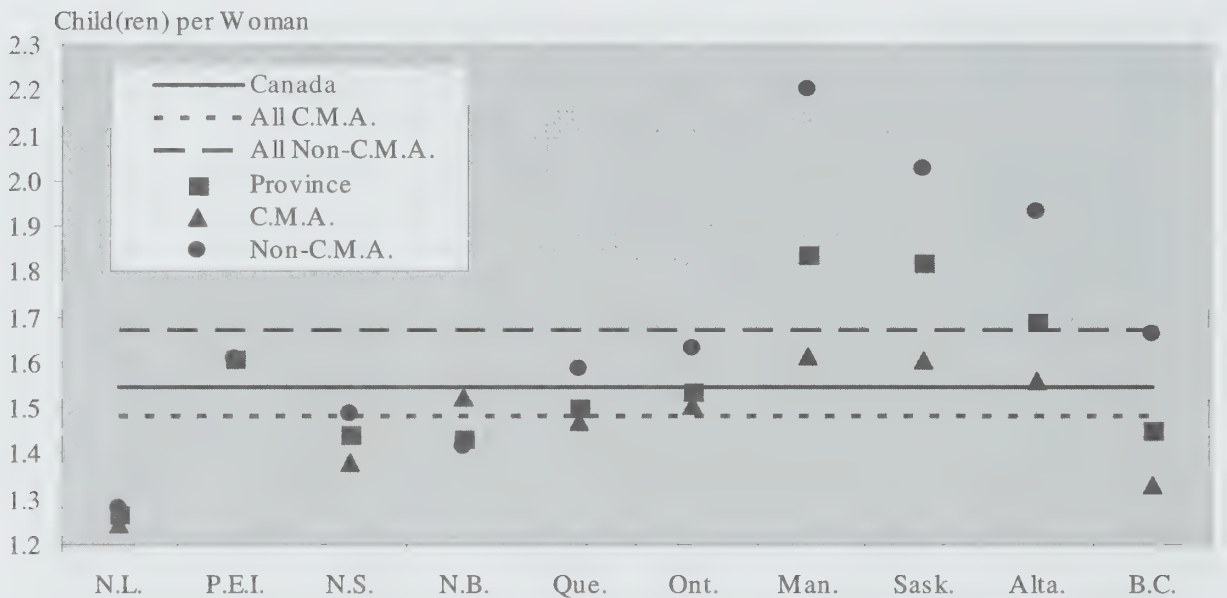
<sup>1</sup> West Germany before 1990.

**Sources:** Monnier, A. "La conjoncture démographique : L'Europe et les pays développés d'outre-mer", *Population*, various annual publications and Statistics Canada, Demography Division.

above that level, and in 2000, it even exceeded the replacement level (2.1 children per woman). That country stands out from all other developed countries in that it has maintained a fertility rate approaching the replacement level over a long period. Other countries that have experienced an increase — even a sizable one — in their fertility, such as Sweden in the early 1990s, have seen it subsequently fall to even lower levels. This is also the case with Canada, although the variation in this country has been much less pronounced than in Sweden. For the most recent period, Sweden's fertility rate has risen slightly, whereas Canada's continues to decline.

Other industrialized countries have higher rates than Canada. In France, the upward trend in fertility is continuing. In 2000, the total rate reached 1.9 children per women, the second highest among industrialized countries. The other two Anglo-Saxon countries in the Commonwealth, the United Kingdom and Australia, have total fertility rates higher than Canada's, but there too the trend is downward. However, in both those countries, the period fertility rate remains 10% to 15% higher than in Canada.

**Figure 11. Total Fertility Rate for Census Metropolitan and Non-metropolitan Areas by Province, 1996-2000**



**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

Lastly, in the other countries with very low fertility (Spain, Italy, Japan and Germany), the fertility trend during the second half of the 1990s was one of rising fertility, as measured by the period rate, whereas in Canada, the decline in fertility accelerated. Between 1995 and 2000, fertility rose 3% in Italy, 5% in Spain and 9% in Germany. During the same period, fertility remained stable in Japan (-1%) but fell significantly in Canada (-11%).

### Differences in Fertility by Census Metropolitan Area

*The total fertility rate varied between 1,256 children per 1,000 women in Newfoundland and Labrador and 1,796 children per 1,000 women in Saskatchewan.* While differences persist between provinces, those differences are smaller than before World War II. In the past, factors such as religion, ethnicity or linguistic group greatly affected the fertility of different groups, but their influence has tended to diminish. As a result, fertility behaviour is becoming more uniform throughout Canada.

Traditionally, fertility was higher in rural areas than in cities. With diminishing cultural differences, the globalization of information and increased contact between urban and rural areas, the question arises as to whether these differences still persist and how sizable they are.

Figure 11 compares, for each province, the total rate for women residing in census metropolitan areas — the 25 largest urban areas in Canada, each



with a population exceeding 100,000 — with the rate of women residing elsewhere in the province. The data used are drawn from vital statistics. To reduce random fluctuations that may be due to the small number of births per year in less populated areas, the calculations were based on total births during the period from 1996 to 2000.

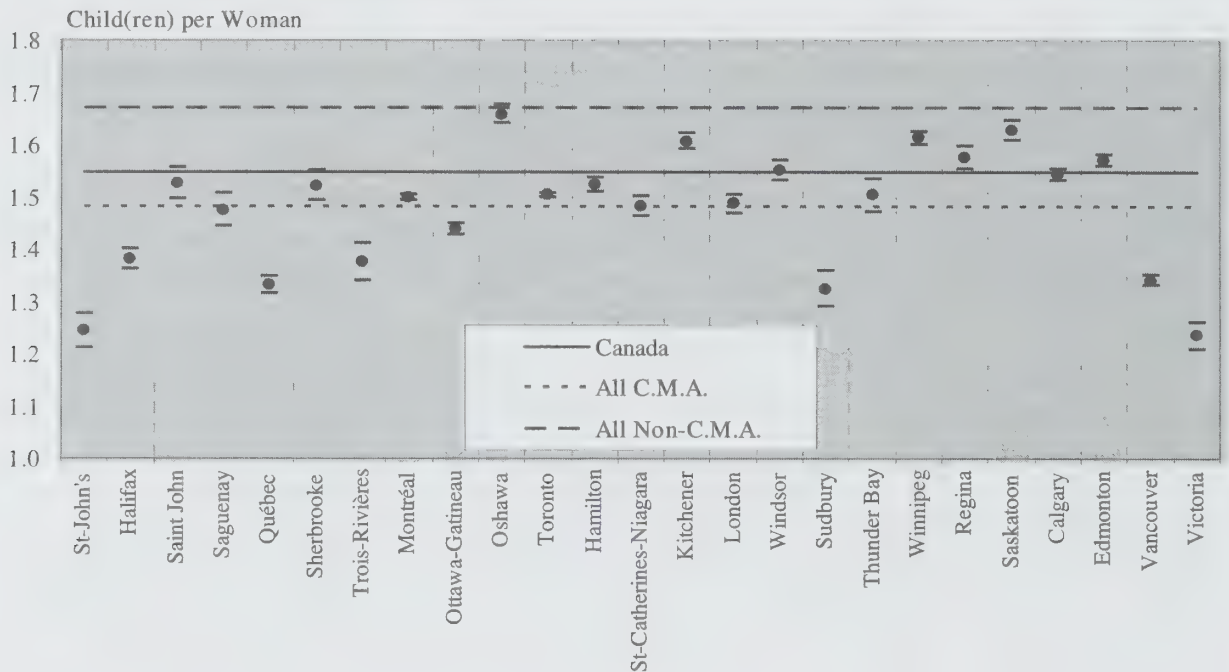
During the period studied, *fertility is higher in non-metropolitan areas than in metropolitan areas. The rate for metropolitan areas overall is 1.48 children per woman, whereas for non-metropolitan areas it is 1.67 children per woman.* Furthermore, provincial variations in the rate are also reflected in the fertility variations between the metropolitan and non-metropolitan areas of each province. Except for New Brunswick, in each province the total rate is higher for women living in non-metropolitan areas than for those living in metropolitan areas. Another point worth noting is that British Columbia is the only province west of Quebec where the rate for metropolitan areas is markedly lower than the rate for metropolitan areas Canada-wide. By contrast, the total rate for the non-metropolitan part of British Columbia is relatively high, surpassed only by the rate for non-metropolitan areas in the Prairie provinces. The relatively low fertility observed in British Columbia in the past few years therefore appears to be more of an urban phenomenon.

Thus, some differences in fertility continue to exist between metropolitan and non-metropolitan areas. But does fertility also vary from one metropolitan area to another?

Figure 12 shows the total rate measured for each of the 25 census metropolitan areas. Like the differences observed at the provincial level, the *fertility of metropolitan areas tends to rise from east to west across Canada. All metropolitan areas east of Oshawa have fertility rates below the national average.* The rates fall below 1.4 children per woman in St. John's (1.24), Halifax (1.38), Quebec (1.33) and Trois-Rivières (1.38). By contrast, the rates are generally high for the metropolitan areas on the Prairies, where they invariably exceed the national average (1.55 children per woman), except for Calgary, which is quite close to the average with 1.54 children per woman.

However, there are a few exceptions to this general pattern. Victoria, at Canada's western edge, has the lowest fertility rate of all metropolitan areas with 1.23 children per woman. The situation is fairly similar in British Columbia's metropolis, with Vancouver having a total rate of 1.34 children per woman, the third lowest after Victoria and St. John's (1.24 children per woman). Among metropolitan areas posting a high fertility rate, *Oshawa, with 1.66 children per woman, has the highest rate of any Canadian metropolitan area*, a rate comparable to that for non-metropolitan areas overall. Probably in this case, the proximity of Toronto explains the high fertility rate observed for Oshawa. A number of young families are drawn to the suburbs, which often provide a better quality of family life and lower housing cost.

**Figure 12. Total Fertility Rate by Census Metropolitan Area, 1996-2000**



**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

The fertility differences observed in the past could be explained by differences in religion, language or ethnic origin. Now, however, the fertility differences observed between census metropolitan areas may probably be best explained by differences in young people's access to the labour market, the cost of housing and the presence of infrastructures favourable to young families (day care centres, schools, green spaces).

## **VOLUNTARY INTERRUPTIONS OF PREGNANCY**

This section looks at recent abortion trends in Canada. The last analysis of voluntary interruptions of pregnancy that was published in the Report on the Demographic Situation in Canada concerned data for the year 1994. Since then, statistics for the period 1995 to 2000 have been disseminated by the Health Statistics Division. The first part is devoted to presenting a few important points on the quality of data on voluntary interruptions of pregnancy in Canada. We then look at the most recent trends for Canada and the provinces.

### **Quality of Data on Voluntary Interruptions of Pregnancy**

Data on voluntary interruptions of pregnancy are collected by the Canadian Institute for Health Information, which transmits them to Statistics Canada. Since 1969, these data have been obtained from a survey of hospitals. Originally, the survey focused on therapeutic abortions, the only type legally allowed in Canada prior to 1988. After the Supreme Court decision, the 1969 Abortion Act was repealed, and in 1988, abortion became legal for reasons other than health (of the mother or child). Since 1988, the survey has therefore also covered abortions performed in public and private clinics.

Abortions performed in Canada on non-Canadian residents are excluded from this survey, which focuses exclusively on voluntary interruptions of pregnancy performed on Canadian women. While miscarriages end a pregnancy prior to birth, they are not voluntary interruptions and are excluded from the survey.

Since 1988, non-therapeutic abortions are no longer illegal in Canada. Before that date, the number of cases could be substantially underestimated, affecting abortion statistics. However, recent statistics cover the vast majority of cases. Even so, the number of abortions may still be slightly underestimated both for administrative reasons and for reasons related to data collection.

Some women may obtain an abortion without going to a hospital or health clinic in Canada. They generally obtain abortions by dilatation or curettage. While these methods are more widespread, other methods are still in use, and it is still possible for a woman to consult a physician who will prescribe various medications that will lead to an abortion outside of a clinic or hospital. Voluntary interruptions of pregnancy, such as by means of a “morning after pill,” are not captured by the survey conducted by the Canadian Institute for Health Information. Also, it is possible that some abortions are still being performed in Canada and are not counted in the official statistics.



Some Canadian provinces, such as Ontario or Quebec, register only those abortions for which a health insurance claim has been filed, and this could cause some underestimation. For example, some women directly pay the hospital or clinic in which they have an abortion. A recent study found that in Ontario, such abortions could account for some 5% of the total, leading to an underestimate of the same order. While it is therefore appropriate to interpret the Ontario data — and probably also the Quebec data — with some caution, the impact at the national level is lower.

Statistics on voluntary interruptions of pregnancy include abortions performed on Canadian women in a number of U.S. states. However, the coverage is not complete; it is mainly states bordering on Canada that provide statistics. Abortions performed on Canadian women in, say, Florida or California are not counted. Because of the fees charged for this operation, few Canadian women are going to the United States for an abortion, now that the operation is more available in Canada. Probably this source of underestimation is relatively minor. Despite these limitations, the quality of abortion statistics at the national level is generally sufficient to allow an analysis of the phenomenon.

## Recent Trends

*The number of abortions performed on Canadian women in the 1990s remained relatively stable, averaging around 105,000 per year. There were 105,400 abortions in Canada in 2000*, similar to the number in 1994 (106,300) published in the last edition of the Report on the Demographic Situation that dealt with this phenomenon. Between these two years, the number of voluntary interruptions of pregnancy initially rose to a peak of 111,700 in 1997, then declined.

However, the weight of these abortions in relation to the number of births registered the same year has varied upward for some ten years, rising from approximately 23% in 1991 to more than 30% in 2000. *In 2000, there was thus nearly one abortion for every three births in Canada.* The increase in this ratio is directly related to the steady decrease in the number of births during the 1990s, since the number of abortions remained relatively stable.

In 2000 as in the past, there were sizable provincial variations in the ratio of abortions to births (Table 6). *In 2000, the ratio in Quebec was 43%, the highest in Canada; there were thus more than two abortions for every five births in that province.* By way of comparison, the ratio was 31% and 34% respectively in Ontario and British Columbia, the next two highest-ranking provinces after Quebec. By contrast, Prince Edward Island (11%), New Brunswick (15%) and Saskatchewan (16%) had the lowest ratios in Canada. There again, this must be seen in connection with the change in the number of births in each province, but also with the varying accessibility of abortion in the different regions of Canada. For example, Prince Edward Island has

**Table 6. Number of Voluntary Interruptions of Pregnancy by Place and Abortions to Births Ratios, Canada, Provinces and Territories, 1999-2000**

Province	Abortions			Births	Ratio Abortions / Births (%)
	In Hospital	In a Clinic	Total		
Newfoundland and Labrador Prince Edward Island Nova Scotia New Brunswick Quebec Ontario Manitoba Saskatchewan Alberta British Columbia Yukon Northwest Territories Nunavut Canada <sup>1</sup>	1999				
	340	511	851	5,055	16.8
	7	138	145	1,515	9.6
	1,766	151	1,917	9,575	20.0
	598	433	1,031	7,615	13.5
	17,647	13,075	30,722	73,596	41.7
	22,340	17,641	39,981	131,080	30.5
	3,166	351	3,517	14,315	24.6
	1,724	174	1,898	12,604	15.1
	5,924	4,264	10,188	38,171	26.7
	9,778	4,864	14,642	41,939	34.9
	..	..	111	383	29.0
	221	17	238	659	36.1
	..	..	155	737	21.0
	63,815	41,620	105,666	337,249	31.3
	2000				
	358	540	898	4,869	18.4
	18	140	158	1,441	11.0
	1,895	94	1,989	9,116	21.8
	617	481	1,098	7,347	14.9
	18,374	12,751	31,125	72,007	43.2
	21,771	17,773	39,544	127,408	31.0
	3,042	324	3,366	14,090	23.9
	1,784	172	1,956	12,140	16.1
	5,907	4,525	10,432	37,006	28.2
	9,131	4,878	14,009	40,672	34.4
	..	..	135	370	36.5
260	21	281	673	41.8	
..	..	178	727	24.5	
63,507	41,705	105,427	327,882	32.2	

<sup>1</sup> Includes abortions in some American states by women residing in Canada, and those which the place of the event was not declared.

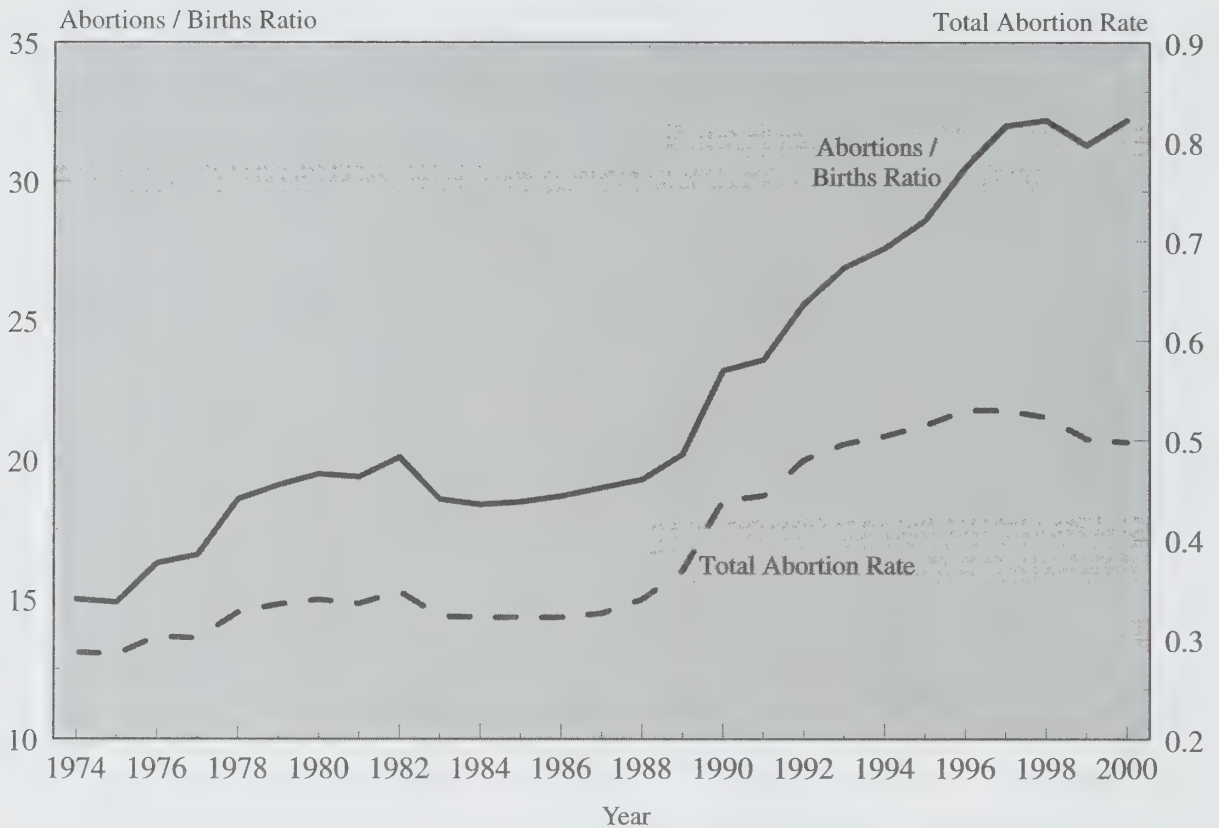
**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

no clinic or hospital that performs this procedure. Residents of that province who underwent an abortion had to go outside the province to do so, with most of the procedures being performed in Nova Scotia.

**Rates by Age Group and Total Abortion Rate**

The number of abortions recorded in a given year will vary according to the number of women of childbearing age and the age structure of the population. The probability of undergoing an abortion is much higher for young women than for those who have reached their mid-thirties. Thus, to better evaluate how the intensity of the phenomenon has evolved over time, it is preferable

Figure 13. Total Abortion Rate and Abortions/Births Ratio, Canada, 1974-1999



Sources: Statistics Canada, Health Statistics Division and Demography Division.

to analyse the change in age-specific abortion rates and the total abortion rate. These two measures control for such variations, and they therefore serve to identify a possible change in behaviour with regard to abortion.

The abortion rate peaks at 32 per 1,000 for women between 20 and 24 years of age. It is approximately 20 per 1,000 for the surrounding two age groups. Beyond age 30, the abortion rate declines rapidly: 14 per 1,000 at 30-34, 8 per 1,000 at 35-39 and less than 3 per 1,000 at 40-44. These rates by age group have remained relatively stable during the last decade, suggesting that women's behaviour with respect to this phenomenon has changed little.

Summing the age-specific rates yields the total abortion rate, which is the average number of abortions that a cohort of women would undergo if, throughout their life, they experienced the rates observed in a given year. **In 2000, the rate was 0.5 abortions per woman** (Figure 13). Before 1988, it varied between 0.30 and 0.35 abortions per woman and then increased for roughly four years following the Supreme Court decision. After reaching



**Table 7. Number of Abortions, Percentage Distribution and Rate per 1,000 Women, by Age Group, Canada, 1976, 1981, 1986, 1991-2000**

Year	Less than 15	15-19	20-24	25-29	30-34	35-39	40-44 <sup>2</sup>	Total <sup>1</sup>
Number								
1976	717	17,315	17,406	11,627	6,390	3,572	1,685	58,712
1981	607	19,739	23,245	14,330	8,636	3,943	1,411	71,911
1986	430	15,133	22,940	15,180	9,474	5,035	1,380	69,572
1991	495	18,214	28,552	22,019	15,004	8,394	2,411	95,089
1992	580	19,190	30,659	23,242	16,333	9,239	2,842	102,085
1993	659	19,989	31,227	23,295	16,929	9,411	2,892	104,402
1994	526	20,757	31,439	23,486	16,581	10,142	2,986	106,255
1995	545	20,275	31,607	23,010	17,178	10,226	3,165	108,248
1996	532	21,138	32,523	23,588	17,471	10,583	3,385	111,659
1997	511	20,633	32,666	23,271	16,941	10,657	3,483	111,709
1998	464	20,859	32,326	22,175	16,349	10,834	3,492	110,331
1999	464	20,610	32,394	21,945	15,682	10,625	3,714	105,666
2000	389	20,426	32,561	21,690	15,763	10,611	3,768	105,427
Percentage Distribution								
1976	1.2	29.5	29.6	19.8	10.9	6.1	2.9	100.0
1981	0.8	27.4	32.3	19.9	12.0	5.5	2.0	100.0
1986	0.6	21.8	33.0	21.8	13.6	7.2	2.0	100.0
1991	0.5	19.2	30.0	23.2	15.8	8.8	2.5	100.0
1992	0.6	18.8	30.0	22.8	16.0	9.1	2.8	100.0
1993	0.6	19.1	29.9	22.3	16.2	9.0	2.8	100.0
1994	0.5	19.5	29.6	22.1	15.6	9.5	2.8	100.0
1995	0.5	18.7	29.2	21.3	15.9	9.4	2.9	100.0
1996	0.5	18.9	29.1	21.1	15.6	9.5	3.0	100.0
1997	0.5	18.5	29.2	20.8	15.2	9.5	3.1	100.0
1998	0.4	18.9	29.3	20.1	14.8	9.8	3.2	100.0
1999	0.4	19.5	30.7	20.8	14.8	10.1	3.5	100.0
2000	0.4	19.4	30.9	20.6	15.0	10.1	3.6	100.0
Rate by Age Group (for 1,000 women) and Total Abortion Rate <sup>3</sup>								
1976	3.1	14.8	15.6	11.4	7.7	5.4	2.7	0.30
1981	3.1	17.0	18.9	12.8	8.3	4.8	2.1	0.34
1986	2.4	15.6	19.2	12.4	8.3	4.9	1.7	0.32
1991	2.7	19.4	27.8	17.8	11.7	7.2	2.3	0.44
1992	3.2	20.5	30.1	19.3	12.6	7.7	2.7	0.48
1993	3.5	21.3	31.0	20.2	13.0	7.6	2.6	0.50
1994	2.7	21.9	31.6	21.1	12.7	8.1	2.7	0.50
1995	2.8	21.5	32.6	21.7	13.5	8.1	2.8	0.51
1996	2.8	22.0	33.6	22.5	14.0	8.2	2.9	0.53
1997	2.7	21.5	33.9	22.6	14.0	8.3	2.9	0.53
1998	2.4	21.6	33.5	21.8	14.1	8.4	2.9	0.52
1999	2.3	20.5	32.1	21.0	13.5	7.9	2.9	0.50
2000	1.9	20.2	31.9	20.8	13.9	7.9	2.9	0.50

<sup>1</sup> Includes abortions in which the age was not declared and abortions in some American states by women residing in Canada, and those which the place of the event was not declared.

<sup>2</sup> Abortions for women aged 45 and over were added to the numerator.

<sup>3</sup> Rates for women aged less than 15 were calculated for those aged 14.

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

nearly 0.5 in 1992, the rate has since been relatively stable, suggesting that behaviour with respect to this procedure is not changing much. For purposes of comparison, in the United States, the total abortion rate has remained at higher levels than the Canadian rate. In 2000, it was 0.7 abortions per woman.

Figure 13 shows the evolution of the total abortion rate and the number of abortions per 100 births in the last quarter century. There is a growing gap in the past decade between the two rates, which contrasts with the almost parallel path that they followed previously. This divergence is more indicative of changes in behaviour regarding fertility than of a shift in behaviour regarding abortion, which is generally no longer changing much in Canada.

### **Few Variations by Age**

Almost one-third of abortions carried out in 2000 were performed on women between 20 and 24 years of age (Table 7). This proportion has been relatively stable for the past ten years, hovering around 30%. Considering that in addition, just over 20% of abortions were performed on women between 25 and 29 years of age, it emerges that approximately one abortion in two is undergone by a woman in her twenties. Abortions performed on teenagers between 15 and 19 years of age account for less than 20% of the total. One-quarter of abortions are performed on women in their thirties, and less than 1 in 20 is performed on women aged 40 and over. These proportions have been relatively stable for the past ten years in Canada.

The majority (60%) of abortions performed in 2000 were done in hospitals (Table 6). However, there were some major provincial variations. Residents of Newfoundland and Labrador and Prince Edward Island made greater use of health clinics than of hospitals, although the numbers are small. In the case of Prince Edward Island, all abortions performed on residents of that province took place outside the province, with Prince Edward Island reporting no cases on its territory. Everywhere else, hospitals are most often sought out for this procedure, sometimes in a large majority of cases such as in Nova Scotia, Manitoba and Saskatchewan.

### **Conclusion**

For some ten years, the behaviour of Canadian women with respect to abortion has not changed much. The total abortion rate stood at 0.5 abortions per woman in 2000. More than half of these procedures were performed on women between 20 and 29 years of age. With the number of births declining, there is now one abortion per three births in Canada, and two abortions per five births in Quebec.

## MORTALITY

*There were 218,000 deaths in Canada in 2000. This was about 1,500 fewer than in the previous year, a decrease of 0.7% (Table A8).* In Canada, the number of deaths generally increases from year to year because of the continual growth and aging of the Canadian population. This is the first break in an upward trend that has lasted nearly 20 years; *not since 1981 has a decrease in the number of deaths been observed.* It is especially surprising since it occurred in a leap year, when an increase in the number of deaths is especially likely since the year contains one more day than usual. In these circumstances, the significant decrease in the number of deaths in 2000 is all the more remarkable.

*Quebec registered the largest decrease in deaths between 1999 and 2000 (-2.6%), followed by British Columbia (-2.0%).* Decreases were also recorded in Saskatchewan (-1.0%) and Ontario (-0.1%), although they were smaller. All other provinces saw the number of deaths rise between 1999 and 2000.

An analysis of the age distribution of the change in the number of deaths shows that more than 90% of the decrease of 1,500 deaths in Canada in 2000 occurred within the population aged 65 and over. Seasonal variations in the number of deaths are especially sizable among the very old, who are more likely than younger persons to die during the winter months. Figure 14 compares the monthly change in the daily number of deaths in 1999 and 2000 for three major age groups. In February 1999, the average number of deaths of very old persons was 25% higher than the daily average for this age group, while for the population as a whole, the index for February 1999 was 15% above the daily average. In February and March 2000, the index for persons aged 80 and over did not exceed that for the population as a whole.

Compared to 1999, just over 200 additional deaths were recorded in 2000 among the elderly population aged 90 and over. The change in the number of deaths within this rapidly growing population, characterized by its fragile health, seems less affected by seasonal variations in mortality. The intensity of mortality is especially high at these ages for many causes of death.

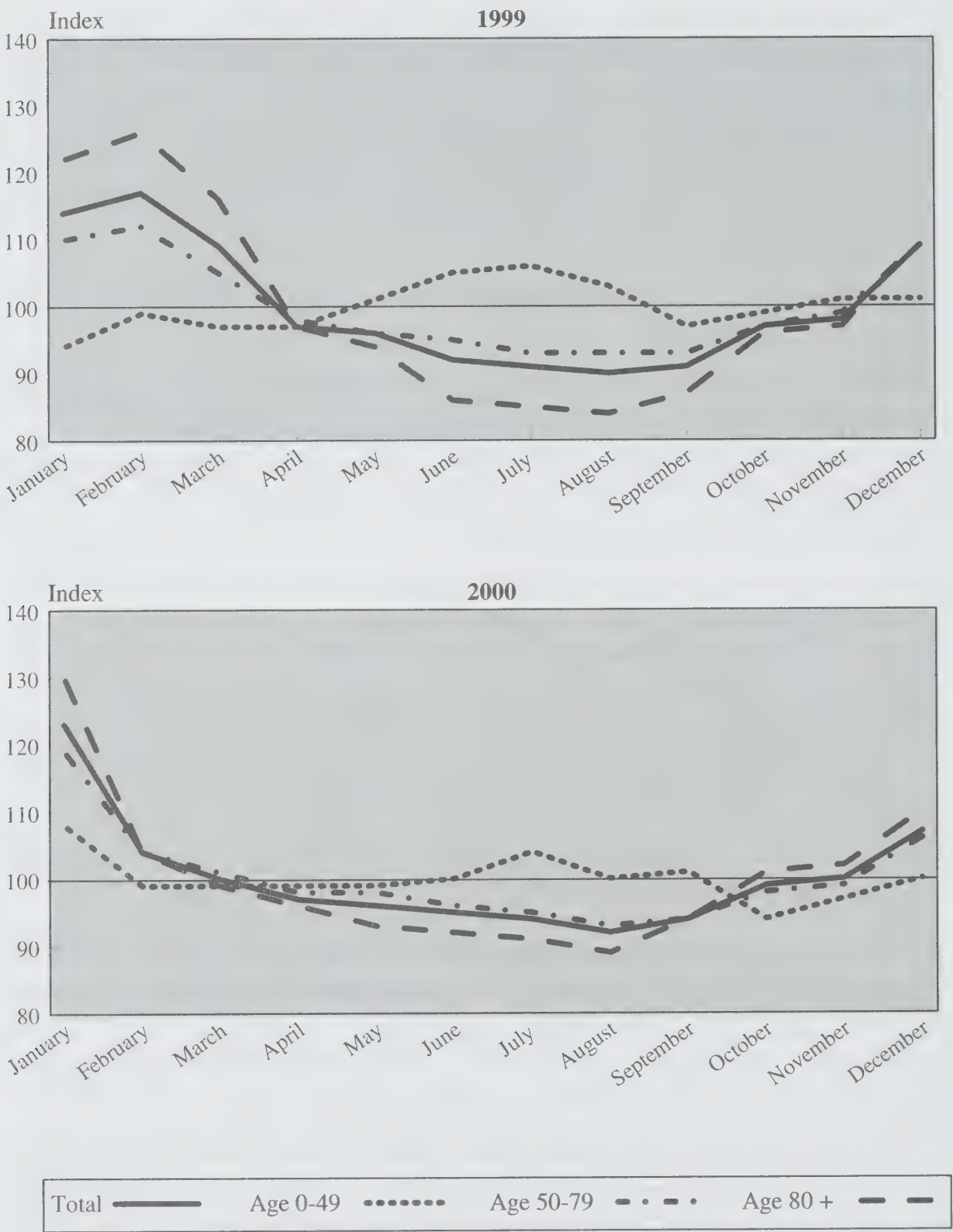
Between 1999 and 2000, the number of deaths also increased slightly among persons aged 20 to 24 and those between 50 and 64. Since age-specific rates declined for all age groups, these slight increases are explained by the fact that larger cohorts are moving into these age ranges.

### Infant Mortality

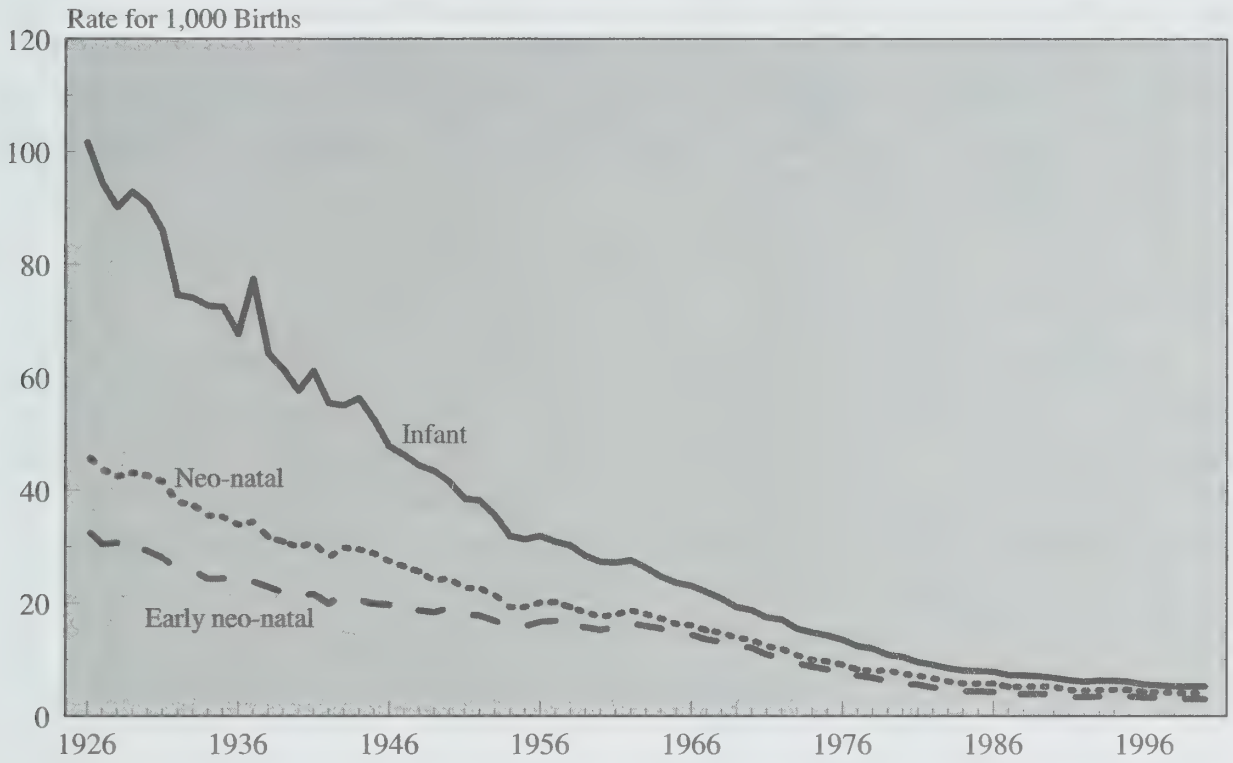
The number of deaths of children under one year of age declined slightly between 1999 and 2000 (-46 deaths). This decrease is largely attributable to



**Figure 14. Index of Monthly Deaths for Three Major Age Groups, Canada, 1999 and 2000**



**Figure 15. Infant, Neo-natal and Early Neo-natal Mortality Rates, Canada, 1926-2000**



**Source:** Statistics Canada, Health Statistics Division.

a decrease in the number of births from one year to the next, since the infant mortality rate remained nearly stable (5.3 per 1,000) (Figure 15).

This figure clearly shows the progress achieved in Canada in the past 80 years with respect to infant mortality. Whereas in 1926, one child in 10 died before its first birthday, the infant mortality rate was nearly 20 times lower in 2000. Even though the decline in infant mortality has slowed in recent decades, the rate could fall below 5 per 1,000 in the coming years. Some industrialized countries such as Iceland (3.0 per 1,000), Sweden (3.4 per 1,000) or Japan (3.9 per 1,000) already have rates lower than that.

The risks of death are higher in the first days of a newborn's life. While infant mortality declined spectacularly on all fronts during the twentieth century, the gains were less rapid for neonatal mortality, which is more related to endogenous health problems that are more difficult to prevent and cure. In 2000, nearly half the deaths of children under one year of age occurred in the first week of life, and nearly 75% occurred in the first month. By way of comparison, in 1926, these proportions were respectively roughly one third and one half, suggesting that the drop in infant mortality resulted mainly from

a sharp decrease in mortality due to exogenous causes. This means that infants' chances of survival after the first week improved even more rapidly than the probability of survival from age 0 to 1 year. Compared to the initial situation, the gap between neonatal mortality and infant mortality has narrowed, and infant mortality increasingly refers to mortality in the very first days of life. This new situation is mainly the result of the past evolution of infant mortality, since in recent years, neonatal mortality and early neonatal mortality have been declining at a similar rate.

### **Life Expectancy on the Rise**

In 2000, Canadians' male and female life expectancy increased by 0.4 and 0.3 years respectively compared to the previous year (Table A9, in appendix). If they were to experience throughout their life the risks of dying that were observed at each age in 2000, *Canadian males would live 76.7 years and Canadian females would live 82.0 years. Their life expectancy at birth is therefore one of the highest in the world*. In 2000, the life expectancy of Canadian females was behind only that of Japanese (84.8 years), French (82.7 years), Spanish (82.7 years) and Swiss (82.6 years) females. For their part, Canadian males were behind only Japanese (77.4 years), Icelandic (78.0 years), Swedish (77.4 years) and Swiss (76.9 years) males on this score (Table 8).

The gap between male and female life expectancy at birth in 2000 was 5.3 years, compared with 7.3 years in 1976. *While the gap between the two sexes is narrowing, male life expectancy in 2000 was barely higher than female life expectancy in 1971*. One reason for the narrowing of the gap is that women are adopting traditionally male behaviours (participation in the labour force, smoking, alcohol consumption, etc.).

Life expectancy at age 65 has also increased for both sexes. In 2000, it reached 16.8 years for males and 20.5 years for females, an increase of 0.3 years and 0.2 years respectively compared with 1999.

### **Provinces**

Provincial variations in mortality are tending to shrink over the years, and life expectancy at birth now varies little from one province to another (Figure 16), probably owing to the introduction of national public health policies. Before 1950, major disparities existed. Quebec was one province with a much lower life expectancy than elsewhere in Canada. In the second half of the twentieth century, the situation of high-mortality provinces improved more rapidly than that of low mortality provinces, leading to some convergence among the life expectancies recorded in the various provinces.

Nevertheless, some provincial differences in mortality persist. As has been the case for some years, *Newfoundland and Labrador has Canada's*



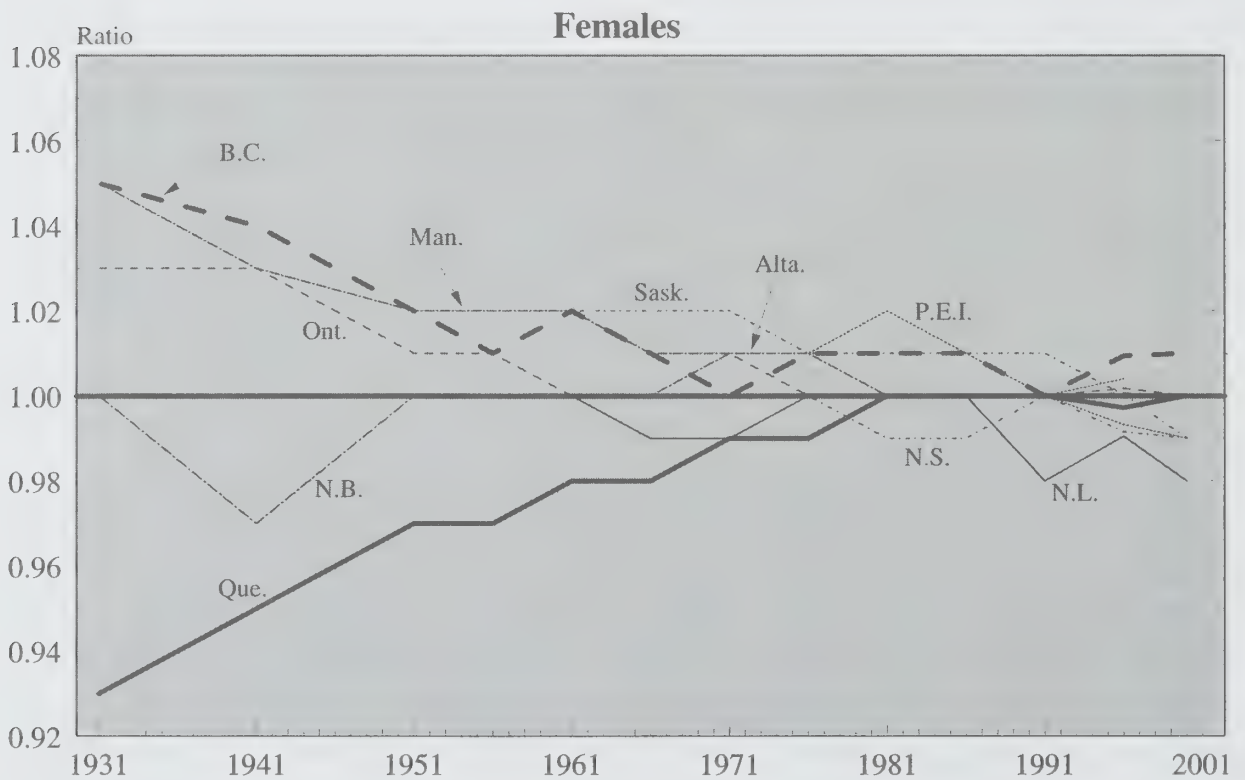
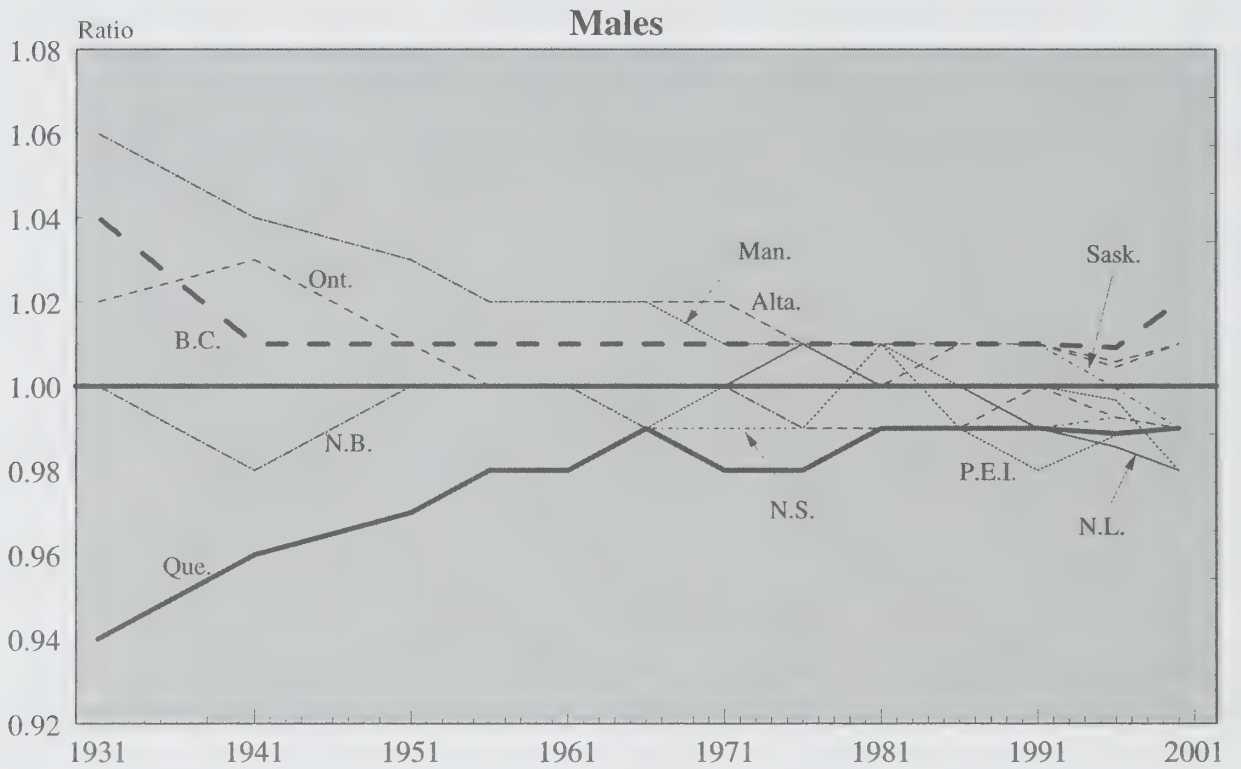
**Table 8. Life Expectancy at Birth for Selected Industrialized Countries, 1978-2000**

Year	Germany <sup>1</sup>	Australia	United States	France	Italy	Japan	Great Britain	Sweden	Canada
Males									
1978	69.4	..	69.5	69.9	..	73.2	..	72.4	71.0
1979	69.6	..	70.0	70.1	..	73.1	..	72.5	71.3
1980	69.9	71.0	70.0	70.2	70.6	73.4	70.8	72.8	71.7
1981	70.2	71.4	70.4	70.4	71.1	73.8	71.0	73.1	72.0
1982	70.5	71.2	70.9	70.7	71.3	74.1	71.1	73.4	72.4
1983	70.8	72.1	71.0	70.7	71.4	74.3	71.4	73.6	72.7
1984	71.2	72.6	71.2	71.3	71.6	74.7	71.6	73.8	72.9
1985	71.5	72.4	71.1	71.3	..	74.8	71.7	73.8	73.1
1986	71.8	72.8	71.3	71.5	..	75.4	71.9	74.0	73.3
1987	71.5	73.0	71.5	72.0	72.6	75.6	72.2	74.2	73.5
1988	72.2	73.1	71.5	72.4	73.2	75.8	72.4	74.2	73.7
1989	72.6	73.3	71.8	72.5	73.5	75.9	72.7	74.8	74.0
1990	72.0	73.9	71.8	72.8	73.6	75.9	72.9	74.8	74.3
1991	72.1	74.4	72.0	72.9	73.6	76.1	73.2	74.9	74.6
1992	72.6	74.5	72.3	73.2	74.0	76.1	73.6	75.4	74.7
1993	72.7	75.0	72.2	73.3	74.4	76.3	73.6	75.5	74.9
1994	73.0	75.2	72.4	73.7	74.7	76.6	74.2	76.1	75.0
1995	73.2	75.2	72.5	73.9	74.8	76.4	74.0	76.2	75.2
1996	73.6	..	73.1	74.1	75.3	77.0	74.3	76.5	75.4
1997	74.0	..	73.6	74.6	75.7	77.2	74.6	76.7	75.8
1998	74.5	..	73.8	74.8	75.7	77.2	74.8	76.9	76.0
1999	74.7	..	73.9	74.9	..	77.1	75.0	77.1	76.3
2000	..	..	74.1	75.2	..	77.4	75.4	77.4	76.7
Females									
1978	76.1	..	77.2	78.0	..	78.5	..	78.6	78.4
1979	76.4	..	77.8	78.3	..	78.5	..	78.7	78.7
1980	76.6	78.1	77.4	78.3	77.2	78.8	76.9	78.8	78.9
1981	76.8	78.4	77.9	78.5	..	79.2	77.0	79.1	79.2
1982	77.1	78.2	78.1	78.9	..	79.7	77.0	79.4	79.4
1983	77.5	78.7	78.1	78.8	78.1	79.9	77.2	79.6	79.6
1984	77.8	79.1	78.2	79.4	78.1	80.4	77.4	79.9	79.8
1985	78.0	78.8	78.2	79.3	78.6	80.5	77.6	79.6	79.9
1986	78.4	79.1	78.3	79.6	..	81.3	77.6	80.0	80.0
1987	78.1	79.5	78.4	80.3	79.2	81.4	77.9	80.2	80.2
1988	78.7	79.5	78.3	80.5	79.7	81.6	78.0	80.0	80.4
1989	79.0	79.6	78.5	80.7	80.0	81.8	78.3	80.6	80.6
1990	78.4	80.1	78.8	80.9	80.1	81.9	78.6	80.4	80.7
1991	78.7	80.4	78.9	81.1	80.3	82.1	78.8	80.5	81.0
1992	79.2	80.4	79.1	81.4	80.6	82.2	79.0	80.8	81.0
1993	79.2	80.9	78.8	81.4	80.7	82.5	78.9	80.8	81.0
1994	79.5	81.1	79.0	81.8	81.2	83.0	79.4	81.4	81.0
1995	79.7	81.0	78.9	81.8	81.3	82.9	79.2	81.4	81.1
1996	79.9	..	79.4	82.0	81.5	83.6	79.4	81.5	81.2
1997	80.3	..	79.5	82.3	81.6	83.8	79.6	81.8	81.3
1998	80.5	..	79.5	82.4	81.8	84.0	79.7	81.9	81.5
1999	80.7	..	79.4	82.4	..	84.0	79.8	81.9	81.7
2000	..	..	79.5	82.7	..	84.8	80.2	81.7	82.0

<sup>1</sup> West Germany before 1990.

**Sources:** Monnier, A. « La conjoncture démographique : L'Europe et les pays développés d'outre-mer », *Population*, various annual publications, Sardon, J.-P. «Évolution démographique récente des pays développés », *Population*, various annual publications and Statistics Canada, Demography Division.

Figure 16. Ratio of Provincial and Canadian Life Expectancy at Birth by Sex, 1931-2000



Sources: Statistics Canada, Health Statistics Division and Demography Division.

***lowest life expectancy, for both males (75.0 years) and females (80.2 years).*** The difference from the national average is 1.7 years and 1.8 years for males and females respectively. The other Atlantic provinces also have slightly lower life expectancies than Canada as a whole (Summary Table).

In Quebec, Ontario and Alberta, life expectancy at birth is very close to the figure for Canada as a whole. Indeed for females, it is identical to the national average. In Manitoba and Saskatchewan, life expectancy at birth is slightly lower than for Canada as a whole, whereas ***in British Columbia in 2000, life expectancy at birth is the highest in Canada, as it has been for many years.*** Females in that province could expect to live 0.9 years more than Canadian females overall, while for males the difference from the national average was 1.2 years.

## Causes of Death

In 2000, deaths were, for the first time, classified according to the tenth revision of the International Classification of Diseases (ICD-10), proposed by the World Health Organization (WHO). To better reflect current medical knowledge, this revision proposes a few new categories of causes of death, so that the cause can be identified more precisely. Also, some classification principles have been reviewed, such as in the case of deaths caused by a series of events or diseases. In some cases, the changes introduced result in major breaks in mortality rates by cause based on the previous version of the classification.

This major change makes it harder to analyse recent trends in mortality by cause of death, since an increase or decrease in the number of deaths attributed to a disease may result either from an actual change in the lethality or incidence of the disease or from the reclassification of diseases, or from the two factors combined.

By classifying deaths from one year according to the two classifications, ratios of comparability between the new classification and the old one have been produced for a number of diseases and major causes of death (chapters). As a result, it is possible to estimate the impact of introducing the new classification.<sup>2</sup> For major groupings of causes of death such as tumours and cancers, shown in Table 9, these ratios approach 1, which indicates that statistics on these diseases are quite comparable between the two classifications.

However, the rates from years prior to 2000 shown in Table 9 were recalculated to take account of some diseases whose classification has changed.

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<sup>2</sup> Geran L, P. Tully and P. Wood (2003). *A Comparability Study for the Implementation of the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) for Mortality Data in Canada: Preliminary Results*, Health Statistics Division, internal working paper, Statistics Canada.



Some groupings of diseases in the ninth classification correspond to those in the tenth classification, but others — generally smaller ones — do not. The standardized rates shown in Table 9 were therefore calculated for groupings of diseases for which there is substantial correspondence between the two classifications. These groupings generally represent almost all deaths from a given cause. The reader may therefore notice that the rates for a year prior to 2000 that appear in Table 9 of this edition of the Report differ slightly from those published in previous editions.

### *Downward Trends Continue*

In general, the mortality rates observed for major causes of death in Canada are down, indicating the progress achieved in preventing or treating these diseases. While the death rate for diseases of the circulatory system continued its downward trend in 2000, this is nevertheless the leading cause of death in Canada, with standardized rates of 214 and 206 per 100,000 for males and females respectively (Table 9). The gap separating death rates for diseases of the circulatory system from those for tumours and cancers is nevertheless continuing to narrow because the death rate for tumours and cancers is declining less rapidly. In fact, among females, the death rate for tumours and cancers even rose slightly in 2000.

Of the two main components of the mortality rate for diseases of the circulatory system, that for ischemic heart diseases is the one that declined the most in 2000, as it has in the past two decades. Deaths from cerebrovascular diseases also declined, for both males and females, but less markedly. Shorter reaction times, improved treatment of heart attacks and better eating habits are among the factors underlying this trend, which should continue in the years to come.

Continuing a long trend, the gap separating male and female mortality rates for malignant tumours of the respiratory system continues to narrow, with male mortality rates steadily falling since 1988 and female rates generally rising. Closely related to tobacco use, these trends reflect not only efforts to combat smoking, but also cohort replacement. New cohorts of women have smoked more during their life than their predecessors, while old cohorts of men smoked more than recent cohorts have.

### **Deaths Attributable to HIV**

The adoption of IDC-10 has a greater impact on the analysis of trends in mortality attributable to HIV, since the new classification includes more deaths under this cause than the former classification, particularly because of changes made to the rules for determining the primary cause of death. The ratio of comparability produced by the Health Division for this cause is 1.10, meaning

**Table 9. Evolution of Mortality from Diseases of the Circulatory System and from Tumours, by Sex, Canada, 1981-2000<sup>1</sup>**

Year	Diseases of the Circulatory System <sup>2</sup>	Ischemic Heart Diseases <sup>3</sup>	Cerebro-vascular Diseases <sup>4</sup>	Tumors and Cancers <sup>5</sup>	Malignant Tumors of the Respiratory System <sup>6</sup>
Males					
1981	411.99	272.00	63.87	209.92	65.56
1982	402.81	264.74	59.66	213.74	69.18
1983	387.30	253.67	56.18	213.11	70.06
1984	370.19	242.32	54.66	217.52	71.71
1985	361.19	236.15	51.80	217.79	69.42
1986	351.83	227.36	50.11	218.55	70.34
1987	333.97	216.33	48.96	217.48	69.92
1988	325.48	210.16	46.80	222.20	72.08
1989	312.07	198.42	47.22	218.56	71.98
1990	288.48	181.90	45.20	216.10	70.56
1991	281.59	176.31	43.43	216.31	69.76
1992	275.35	171.72	42.36	214.14	68.54
1993	276.87	171.67	44.18	212.62	68.63
1994	265.92	163.70	42.77	211.50	66.64
1995	260.37	158.37	42.52	208.91	64.27
1996	253.48	154.15	40.88	206.29	63.87
1997	245.12	147.00	40.75	200.62	61.11
1998	238.69	141.99	38.40	200.88	61.37
1999	231.04	137.54	36.57	199.58	61.47
2000	213.92	131.85	35.62	196.96	56.28
Females					
1981	361.41	197.39	82.89	167.81	19.38
1982	356.35	194.77	79.65	168.20	21.25
1983	339.19	183.88	75.20	168.56	21.65
1984	328.23	180.79	71.13	171.59	24.13
1985	319.47	172.65	69.75	174.92	25.77
1986	315.86	170.83	69.03	174.88	26.09
1987	299.24	161.74	64.54	174.17	27.52
1988	293.75	156.76	64.85	176.05	29.37
1989	280.83	148.58	62.82	173.87	29.48
1990	265.75	141.56	58.32	173.78	30.19
1991	261.09	137.91	57.71	174.73	32.28
1992	253.03	130.83	57.64	173.93	32.39
1993	255.25	130.97	59.43	176.83	34.77
1994	249.94	127.23	57.12	176.87	34.95
1995	244.67	123.98	55.90	173.63	34.52
1996	240.22	120.53	55.20	177.35	36.98
1997	234.37	116.82	55.22	170.43	35.70
1998	226.46	111.29	52.28	173.10	38.14
1999	217.76	106.05	49.97	171.55	38.56
2000	205.76	102.86	48.74	172.12	37.97

<sup>1</sup> Rate (per 100,000) standardized on the structure by age and sex of the 1991 population. The rates are not comparable between sexes but the tendencies can.

<sup>2</sup> Chapter VII of the 9th revision of the ICD or chapter IX of the 10th revision of the ICD

<sup>3</sup> Causes 410-414 of the 9th revision of the ICD or causes I20-I25 of the 10th revision of the ICD

<sup>4</sup> Causes 430-438 of the 9th revision of the ICD or causes I60-I69 of the 10th revision of the ICD

<sup>5</sup> Chapitre II of the 9th or 10th revision of the ICD

<sup>6</sup> Causes 162 of the 9th revision of the ICD or causes C33-C34 of the 10th revision of the ICD

**Note:** 9th revision of the ICD before 2000.

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.

**Table 10. Deaths Due to HIV<sup>1</sup> by Broad Age Groups and Sex, Canada, 1987-2000**

Year	0-14	15-29	30-44	45-59	60 +	Total	Variation from the previous year (%)
Males							
1987	1	85	293	87	22	488	...
1988	2	96	361	126	29	614	25.8
1989	3	124	485	164	21	797	29.8
1990	3	109	575	215	35	937	17.6
1991	3	129	698	233	42	1,105	17.9
1992	4	161	783	305	35	1,288	16.6
1993	7	159	924	330	54	1,474	14.4
1994	4	127	954	350	54	1,489	1.0
1995	9	129	1,041	409	49	1,637	9.9
1996	6	79	754	315	44	1,198	-26.8
1997	3	45	322	144	39	553	-53.8
1998	0	26	247	117	25	415	-25.0
1999	1	14	201	128	21	365	-12.0
2000	1	13	231	155	29	429	17.5
Females							
1987	5	7	12	8	5	37	...
1988	3	10	18	7	9	47	27.0
1989	2	10	20	10	12	54	14.9
1990	1	14	19	7	4	45	-16.7
1991	4	15	25	14	7	65	44.4
1992	4	10	38	11	7	70	7.7
1993	2	19	49	13	7	90	28.6
1994	14	16	77	26	6	139	54.4
1995	5	24	68	20	10	127	-8.6
1996	2	24	63	14	5	108	-15.0
1997	2	7	48	12	4	73	-32.4
1998	0	6	47	14	3	70	-4.1
1999	0	7	44	8	7	66	-5.7
2000	1	11	49	13	8	82	24.2

<sup>1</sup> Causes 042-044 of the 9th revision of the ICD or causes B20-B24 of the 10th revision of the ICD

**Note:** 9th revision of the ICD before 2000.

**Source:** Statistics Canada, Health Statistics Division.

that solely because of the classification change, the number of deaths attributed to HIV was 10% higher in 1999 than under the old classification system in Table 10.

Compared to the 1999 estimate, based on the old classification, the number of death attributable to HIV is estimated to have increased by 18% among males and 24% among females. This is the first rise since 1995 and is due in part to the change in classification. The increase is 64 deaths for males and 16 deaths for females. In 2000, 429 deaths of men and 82 deaths of women were attributed to HIV, down considerably from the annual number of deaths due to this cause in the first half of the 1990s. Thus, HIV continues



to have fewer victims than was the case a few years ago. And in 2000, these victims were still predominately male: there were five deaths of males for every death of a female.

The majority of deaths attributable to HIV occur in the population aged 30 to 44 and is related to the average period of 10 years that it takes for HIV-positive persons to develop AIDS. Frequently, persons infected with HIV during their twenties die during their thirties, or sometimes their forties depending on the treatments. Among men, 9 deaths in 10 occur between 30 and 59 years of age, while the corresponding proportion for women is 4 in 5.

The decrease in death due to this cause in the second half of the 1990s may be related to the success of the new treatments against HIV, since the prevalence of the disease continues to rise in Canada. It is estimated that nearly 50,000 Canadians were HIV-positive in 1999, compared to approximately 40,000 in 1996. Even though the incidence of the disease appears to be stable — in the range of 4,200 new cases per year in Canada — the number of persons who are carrying HIV (and are therefore at risk of developing AIDS) is still increasing.

## INTERNATIONAL IMMIGRATION

*Canada received 250,400 new immigrants in 2001. This was an increase of 23,100 or 10% compared with 2000* (Table A10, appended). The increase was essentially due to additional appropriations temporarily granted to the department responsible, which were used to reduce the backlog of cases in offices abroad.

This was the third consecutive year of growth, bringing Canada to practically the levels observed during the years 1992 and 1993 when it received 255,000 immigrants per year. In fact, excluding the exceptional year 1957, when 282,200 persons immigrated to Canada, the level in 2001 is the third highest in Canada's recent history (Figure 17). This is indicative of Canada's efforts to boost immigration, which seems increasingly essential for maintaining population growth.

For a second consecutive year, the estimated levels in the Immigration Plan announced by Citizenship and Immigration Canada were exceeded. The plan anticipated the admission of 200,000 to 225,000 immigrants (Table 11). The expected levels were therefore exceeded by about 25,400 persons. In 2001, the immigration rate was 8 per 1,000, up slightly from the year 2000 but still lower than the Canadian government objective of achieving a rate of

1% of the population (10 per 1,000). This new increase in immigration thus brings us close to the government's long-term objective. Canada would have to receive more than 300,000 immigrants (50,000 more than in 2001) to meet this objective in 2002. The target range set out in the new immigration plan was between 210,000 and 235,000 persons.

**Table 11. Number of Immigrants Admitted and Number Planned by Class According to the Immigration Plan, Canada, 2001**

Class	Number Planned	Observed Number
Family	57,000 - 61,000	66,684
Economic	116,900 - 130,700	150,443
Other <sup>1</sup>	4,000	5,407
Total Immigrants	177,900 - 195,700	222,534
Total Refugees	22,100 - 29,300	27,909
Total	200,000 - 225,000	250,443

<sup>1</sup> Includes deferred removal order and post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

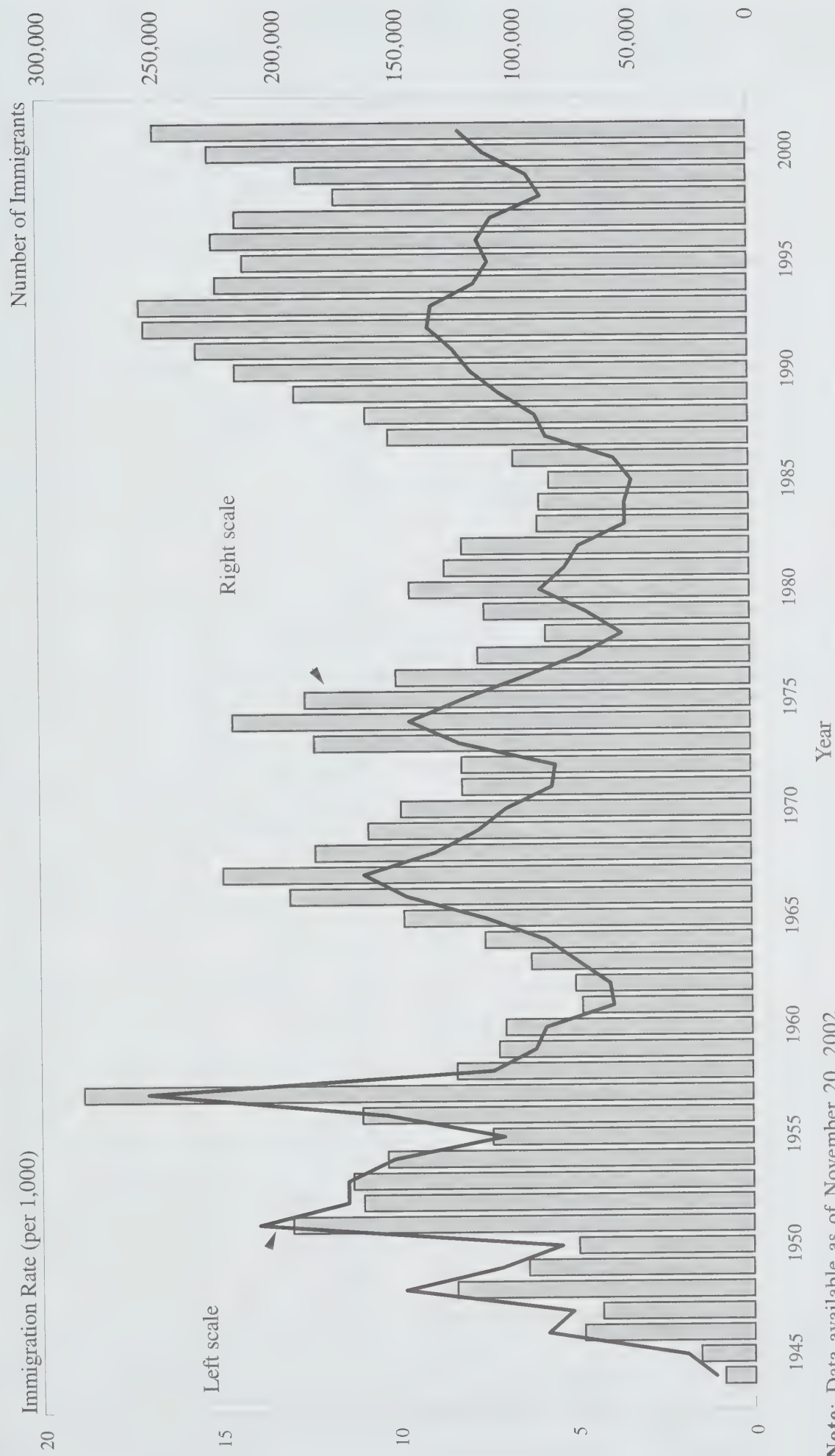
**Note:** Data available as of November 20, 2002.

**Source:** Citizenship and Immigration Canada, Internet site, November 20, 2002.

### Immigrant Classes

*Some 150,400 persons entered Canada in 2001 under the economic component of the immigration policy, representing more than 60% of all immigrants*

Figure 17. Number of Immigrants and Immigration Rate, Canada, 1944-2001



**Note:** Data available as of November 20, 2002.  
**Sources:** Employment and Immigration Canada, *Immigration Statistics* and after 1980, Citizenship and Immigration Canada.



**Table 12. Immigrants to Canada by Class, 1981-2001**

Year	Family	Economic	Refugees	Others <sup>1</sup>	Total
	Number				
1981	50,535	56,702	15,062	6,495	128,794
1982	50,187	51,148	17,002	2,994	121,331
1983	48,987	24,186	14,064	2,140	89,377
1984	44,593	26,097	15,556	2,353	88,599
1985	39,355	26,113	16,769	2,102	84,339
1986	42,471	35,838	19,199	1,835	99,343
1987	53,796	74,101	21,466	2,666	152,029
1988	51,398	80,222	26,740	3,172	161,532
1989	60,940	90,141	36,865	3,570	191,516
1990	74,367	95,640	36,101	10,315	216,423
1991	85,951	80,009	35,881	30,936	232,777
1992	96,798	82,282	37,024	38,751	254,855
1993	110,442	95,654	24,884	25,770	256,750
1994	93,719	96,574	19,750	14,352	224,395
1995	77,228	100,910	27,764	6,970	212,872
1996	68,325	120,282	28,342	9,108	226,057
1997	59,959	125,471	24,134	6,467	216,031
1998	50,888	94,976	22,702	5,612	174,178
1999	55,272	105,467	24,379	4,831	189,949
2000	60,560	132,036	30,065	4,706	227,367
2001	66,684	150,443	27,909	5,407	250,443
	Percentage				
1981	39.2	44.0	11.7	5.0	100.0
1982	41.4	42.2	14.0	2.5	100.0
1983	54.8	27.1	15.7	2.4	100.0
1984	50.3	29.5	17.6	2.7	100.0
1985	46.7	31.0	19.9	2.5	100.0
1986	42.8	36.1	19.3	1.8	100.0
1987	35.4	48.7	14.1	1.8	100.0
1988	31.8	49.7	16.6	2.0	100.0
1989	31.8	47.1	19.2	1.9	100.0
1990	34.4	44.2	16.7	4.8	100.0
1991	36.9	34.4	15.4	13.3	100.0
1992	38.0	32.3	14.5	15.2	100.0
1993	43.0	37.3	9.7	10.0	100.0
1994	41.8	43.0	8.8	6.4	100.0
1995	36.3	47.4	13.0	3.3	100.0
1996	30.2	53.2	12.5	4.0	100.0
1997	27.8	58.1	11.2	3.0	100.0
1998	29.2	54.5	13.0	3.2	100.0
1999	29.1	55.5	12.8	2.5	100.0
2000	26.6	58.1	13.2	2.1	100.0
2001	26.6	60.1	11.1	2.2	100.0

<sup>1</sup> Includes deferred removal order and post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of November 20, 2002.

**Source:** Citizenship and Immigration Canada.

(Table 12). During the 1990s, this percentage rose substantially, since it was only 32% and 37% respectively in 1992 and 1993, years when the total number of immigrants reached a level comparable to that observed in 2001. In fact, never before had Canada received so many economic immigrants, since the previous year's peak of 132,000 persons was exceeded by just over 18,000 in 2001. This reflects the government's intention to support the growth of the labour force by encouraging the immigration of skilled workers who can more quickly integrate into the Canadian economy.

The number of immigrants admitted for family reasons also increased in 2001, reaching 66,700 persons. However, their percentage share of the total (27%) remained unchanged from 2000. The corresponding percentage in the early 1990s was much higher. In 1993, for example, 110,400 immigrants were admitted to Canada under this component of the immigration policy, accounting for 43% of the total for that year. The relative size of this immigrant class thus declined during the 1990s, and the expected levels for 2002 are in the range of 56,000 to 62,000.

The number and proportion of refugees admitted to Canada in 2001 was down slightly from 2000, since the 27,900 persons who entered under this category accounted for 11% of all immigrants received, compared to 13% in 2000. Much of this decrease is due to a drop in the number of refugees from the former Yugoslavia and Sri Lanka. For example, Canada admitted 2,800 refugees from the former Yugoslavia in 2001, compared to 5,600 in 2000. On the other hand, the number of refugees from Afghanistan increased in 2001 to 3,500, making it the leading country of origin of refugees to Canada in 2001. Under the Canadian government's immigration plan, it is expected that in 2002, refugees will account for some 10% of new arrivals, a proportion very close to that observed in 2001.

### **Place of Birth of Immigrants**

To study immigrants' country of origin, one can choose between three variables: country of last residence (for operational planning and the demographic accounts), country of citizenship and country of birth (for comparisons with census statistics). The country of last residence variable can pose a problem when looking at the last 10 to 15 years, because strictly speaking, many claimants who obtain refugee status here have Canada as their country of last residence. It is for this reason that we use place of birth as a characteristic for analysing the immigrants' origin.

As was the case in 2000, *more than 62% of immigrants admitted to Canada in 2001 were born in Asia, with most of them coming from China (including Hong Kong), India, Pakistan and the Philippines* (Table A10, appended). *China alone provided 43,800 immigrants to Canada, or almost one-fifth of the total.* This proportion, unchanged from 2000, is nevertheless

**Table 13. Number of Immigrants According to the 10 Main Countries of Birth by Class, Canada, 2001**

Country of Birth	Economic	Family	Refugees	Others <sup>1</sup>	Total
China and Hong Kong	34,739	7,551	735	745	43,770
India	17,047	12,934	745	67	30,793
Pakistan	10,957	3,082	1,940	48	16,027
Philippines	7,587	3,483	15	2,542	13,627
South Korea	8,471	759	26	288	9,544
Iran	3,574	1,005	1,524	61	6,164
Sri Lanka	1,312	1,924	2,566	42	5,844
Romania	4,533	1,007	170	4	5,714
United States	2,279	2,917	46	29	5,271
Russia	3,463	1,138	444	148	5,193

<sup>1</sup> Includes deferred removal order and post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of November 20, 2002.

**Source:** Citizenship and Immigration Canada.

lower than in 1994, when 40% of the immigrants received were natives of that country. The vast majority of Chinese persons admitted to Canada in 2001 were admitted under the economic component of the immigration policy (Table 13); very few entered Canada as refugees (735).

The second-ranking country of origin was India, which provided Canada with nearly 31,000 immigrants in 2001, many of them in the family class. Nearly 13,000 Indians were admitted to Canada in this class, representing 42% of all immigrants from India. In comparison, only 17% of Chinese were admitted under this component of the immigration policy (Table 13). While the situation was similar in 2000, it should nevertheless be noted that a growing number of Indians are coming to Canada as economic immigrants.

As in 2000, Pakistan and the Philippines are the other two countries who provided Canada with more than 10,000 immigrants in 2001 (16,000 and 13,600 respectively). The great majority of the Pakistanis entered Canada as economic immigrants and a certain number (1,900) entered as refugees, while a sizable proportion of Filipinos fell within the "Other" class. Most of them were women who came to Canada as live-in caregivers and then obtained permanent resident status (permanent residents are commonly referred to as "landed immigrants").

Among Asian countries, South Korea showed a sizable increase, relatively speaking, in the number of its nationals admitted to Canada in 2001 (increase of 25%) (Table 14). By contrast, two Asian countries saw a slight decrease in the number of immigrants admitted to Canada: Sri Lanka and Taiwan. The



**Table 14. Countries of Birth from Which more than 2,000 Immigrants Came to Canada in 1999, 2000 or 2001**

Country of Birth	1999	2000	2001	Difference Between 1999 and 2000	Difference Between 2000 and 2001
<b>AFRICA</b>					
Algeria	2,369	2,853	3,438	484	585
Egypt	1,247	1,376	2,086	129	710
Morocco	1,912	2,691	4,062	779	1,371
<b>AMERICA</b>					
Colombia	1,299	2,247	2,933	948	686
United States	4,913	5,140	5,271	227	131
Haiti	1,449	1,650	2,429	201	779
Jamaica	2,364	2,464	2,783	100	319
<b>ASIA</b>					
Afghanistan	2,269	3,159	3,944	890	785
Bangladesh	2,010	3,040	3,749	1,030	709
China <sup>1</sup>	33,883	40,942	43,770	7,059	2,828
South Korea	7,209	7,611	9,544	402	1,933
India	18,840	28,196	30,793	9,356	2,597
Iran	6,201	5,916	6,164	-285	248
Iraq	2,036	2,303	2,684	267	381
Lebanon	1,568	1,897	2,481	329	584
Pakistan	9,586	14,868	16,027	5,282	1,159
Philippines	9,536	10,637	13,627	1,101	2,990
Sri Lanka	4,934	6,065	5,844	1,131	-221
Taiwan	5,325	3,409	3,102	-1,916	-307
Vietnam	1,622	1,954	2,239	332	285
<b>EUROPE</b>					
France	3,180	3,561	3,542	381	-19
Great Britain	3,778	3,777	4,440	-1	663
Romania	3,583	4,588	5,714	1,005	1,126
Ex-U.S.S.R.	9,659	11,238	12,484	1,579	1,246
Russia	4,441	4,877	5,193	436	316
Ukraine	2,833	3,566	3,993	733	427
Others	2,385	2,795	3,298	410	503
Ex-Yugoslavia	6,370	7,132	4,617	762	-2,515
Bosnia-Herzegovina	2,544	2,455	813	-89	-1,642
Others	3,826	4,677	3,804	851	-873

<sup>1</sup> Includes Hong Kong

**Note:** Data available as of November 20, 2002.

**Source:** Citizenship and Immigration Canada.

admission of a smaller number of Sri Lankan refugees explains the decrease for this country, whose refugees account for a sizable proportion of its nationals settling in Canada (44% in 2001).

The number of immigrants from Europe has been stable for the past ten years, hovering around 40,000 (42,600 in 2001). It is worth noting that in 2001, the number of immigrants from China alone exceeded the number of immigrants originating from all European countries combined. However, as a percentage of the whole, European immigration has fluctuated based on

year-to-year changes in the total number of immigrants admitted to Canada. In general, the percentage has been declining since the early 1980s. It was 17% in 2001, compared to 35% in 1981. Of the ten countries providing the most immigrants to Canada, only two were European: Romania (5,700 persons), up 25% from 2000, and Russia (5,200 persons). The number of immigrants originating from the former Yugoslavia, which began to decline several years ago, continued to fall, probably owing to greater stability in the region.

In general, immigrant numbers from other regions of the world — North and Central America, South America, the West Indies and Bermuda, Australasia, Oceania and Africa — all increased slightly, but in each case their relative weight in the whole remained almost unchanged. However, a greater increase may be noted in the case of South America (26%), due primarily to sizable growth (31%) in immigration from Colombia (2,900 persons in 2001).

In conclusion, very few countries that usually provide a large number of immigrants to Canada saw their contribution decline in 2001. Nevertheless, there were a few: Sri Lanka, Taiwan, Germany, Bosnia-Herzegovina, Poland and Somalia (Table 14 and Table A10, appended).

### **Destination of Immigrants**

Since the provinces vary greatly in population size, it is to be expected that the distribution of immigrants on their arrival in Canada might also be unequal. *Three provinces have long attracted the vast majority (nearly 90%) of immigrants: Ontario, Quebec and British Columbia. Ontario accounted for 38% of the Canadian population in 2001; it received 148,600 immigrants that year, or nearly 60% of the 250,400 immigrants admitted* (Table 15). For some years now, Canadian immigration has been concentrated in that province. In 2001, Quebec and British Columbia attracted approximately 15% of immigrants each, or roughly 38,000 persons. This was a slight increase for Quebec compared with 2000, whereas it was the fifth consecutive decrease for British Columbia, which had attracted 23% of new immigrants in 1996. Even so, British Columbia was the only province other than Ontario to receive a greater proportion of all immigrants than its demographic weight within Canada.

Despite sustained economic growth, Alberta attracted 7% of international immigrants in 2001, a proportion that has changed little in the past seven years but is much lower than in 1981, when it was 15%. Alberta's demographic weight is approaching 10% of the Canadian population. Its vigorous population growth is supported more by internal migration than by international immigration.

A province's attractions to immigrants varies amongst immigrant classes (Table 16). Ontario, for example, received 51% of refugees in 2001 and 22% of immigrants in the "Other" class; these proportions were lower than those

**Table 15. Percentage Distribution of Landed Immigrants by Intended Province of Destination, Canada, 1971, 1981, 1986, 1990-2001**

Province	Year														
	1971	1981	1986	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Newfoundland and Labrador	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Prince Edward Island	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nova Scotia	1.5	1.1	1.1	0.7	0.6	0.9	1.2	1.5	1.7	1.4	1.3	1.2	0.8	0.7	0.7
New Brunswick	0.9	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3
Quebec	15.8	16.4	19.6	18.9	22.3	19.1	17.5	12.5	12.8	13.2	12.9	15.3	15.4	14.3	15.0
Ontario	52.8	42.7	50.0	52.9	51.5	54.6	52.5	52.4	54.4	52.9	54.5	53.0	54.8	58.7	59.3
Manitoba	4.3	4.2	3.8	3.1	2.4	2.0	1.9	1.8	1.7	1.7	1.7	1.7	2.0	2.0	1.8
Saskatchewan	1.2	1.9	1.9	1.1	1.1	1.0	0.9	1.0	0.9	0.8	0.8	0.9	0.9	0.8	0.7
Alberta	7.1	15.0	9.7	8.8	7.3	7.0	7.2	8.0	6.7	6.1	5.9	6.4	6.4	6.3	6.5
British Columbia	15.5	17.1	12.6	13.4	13.9	14.5	17.9	21.9	20.9	23.0	22.1	20.7	19.0	16.5	15.3
Yukon, Northwest Territories and Nunavut	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Unknown	0.0	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number	121,717	128,794	99,343	216,423	232,777	254,855	256,750	224,395	212,872	226,057	216,031	174,178	189,949	227,367	250,443

**Note:** Data available as of November 20, 2002.

**Sources:** Employment and Immigration Canada, *Immigration Statistics* and after 1980, Citizenship and Immigration Canada.



**Table 16. Number of Immigrants and Percentage Distribution by Province of Destination and Class, Canada, 2001**

Province	Family	Economic	Refugees	Others <sup>1</sup>	Total
Number					
Newfoundland and Labrador	88	122	157	36	403
Prince Edward Island	36	48	50	1	135
Nova Scotia	444	991	265	14	1,714
New Brunswick	199	297	231	77	804
Quebec	8,470	20,814	7,148	1,073	37,505
Ontario	39,021	94,095	14,236	1,209	148,561
Manitoba	1,096	1,306	1,161	1,019	4,582
Saskatchewan	402	635	595	71	1,703
Alberta	4,951	8,885	1,874	674	16,384
British Columbia	11,746	23,164	2,188	1,214	38,312
Yukon	30	35	0	2	67
Northwest Territories	45	31	1	16	93
Nunavut	4	8	0	0	12
Not Stated	152	12	3	1	168
Total	66,684	150,443	27,909	5,407	250,443
Distribution by Province (%)					
Newfoundland and Labrador	0.1	0.1	0.6	0.7	0.2
Prince Edward Island	0.1	0.0	0.2	0.0	0.1
Nova Scotia	0.7	0.7	0.9	0.3	0.7
New Brunswick	0.3	0.2	0.8	1.4	0.3
Quebec	12.7	13.8	25.6	19.8	15.0
Ontario	58.5	62.5	51.0	22.4	59.3
Manitoba	1.6	0.9	4.2	18.8	1.8
Saskatchewan	0.6	0.4	2.1	1.3	0.7
Alberta	7.4	5.9	6.7	12.5	6.5
British Columbia	17.6	15.4	7.8	22.5	15.3
Yukon	0.0	0.0	0.0	0.0	0.0
Northwest Territories	0.1	0.0	0.0	0.3	0.0
Nunavut	0.0	0.0	0.0	0.0	0.0
Not Stated	0.2	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0
Distribution by Class (%)					
Newfoundland and Labrador	21.8	30.3	39.0	8.9	100.0
Prince Edward Island	26.7	35.6	37.0	0.7	100.0
Nova Scotia	25.9	57.8	15.5	0.8	100.0
New Brunswick	24.8	36.9	28.7	9.6	100.0
Quebec	22.6	55.5	19.1	2.9	100.0
Ontario	26.3	63.3	9.6	0.8	100.0
Manitoba	23.9	28.5	25.3	22.2	100.0
Saskatchewan	23.6	37.3	34.9	4.2	100.0
Alberta	30.2	54.2	11.4	4.1	100.0
British Columbia	30.7	60.5	5.7	3.2	100.0
Yukon	44.8	52.2	0.0	3.0	100.0
Northwest Territories	48.4	33.3	1.1	17.2	100.0
Nunavut	33.3	66.7	0.0	0.0	100.0
Not Stated	90.5	7.1	1.8	0.6	100.0
Total	26.6	60.1	11.1	2.2	100.0

<sup>1</sup> Includes deferred removal order and post determination refugees, live-in caregivers, provincial/territorial nominees, backlog, retirees and not stated.

**Note:** Data available as of November 20, 2002.

**Source:** Citizenship and Immigration Canada.

for immigrants in general (60%) and more especially for economic immigrants (63%) and immigrants in the family class (59%) (Table 16). On the other hand, more than a quarter of all refugees in 2001 settled in Quebec, a much higher proportion than for all other immigrant classes. For its part, British Columbia attracted immigrants in the economic class in nearly the same proportion as for immigrants in general, but it received proportionally fewer refugees and more immigrants in the family class and the “Other” class.

Of all the 148,600 immigrants that Ontario received in 2001, 63% were economic immigrants, 26% belonged to the family class and 10% were refugees. These proportions are very similar to those observed in 2000. Quebec, on the other hand, received more economic immigrants and fewer refugees than in the previous year. Nevertheless, the proportion of refugees settling in Quebec remained high compared to other major immigrant-receiving provinces. Compared with the previous year, the distribution of immigrants by class remained unchanged in British Columbia: 61% were economic immigrants and less than 6% were refugees.

### **Place of Birth of Immigrants Settling in Ontario, Quebec and British Columbia**

When studying immigrants settling in Ontario, Quebec and British Columbia, it is interesting to note their distribution according to place of birth (Table 17). China came first in each of these three provinces, but to varying degrees: more than one immigrant in four settling in British Columbia was of Chinese origin, while the corresponding fraction in Quebec was one in ten.

India was the second country of origin for Ontario and British Columbia, whereas for Quebec, Morocco held that position, followed by France and Algeria. Knowledge of French is widespread in those countries, which gives an advantage to their citizens wishing to settle in Quebec. This factor also explains why immigration from Haiti and Romania is relatively more important in Quebec. In fact, more than 80% of immigrants originating from Morocco, France or Algeria chose Quebec as their province of destination.

The attraction of immigrants from certain countries of origin for a given province of destination also applies to Ontario and British Columbia. For example, almost all (93%) of the 2,600 Jamaicans admitted to Canada in 2001 settled in Ontario; immigrants from Bangladesh, Ukraine, Russia, Sri Lanka and Pakistan also tended to concentrate in that province. For their part, Taiwanese immigrants largely tended to favour British Columbia as their province of destination.

### **Conclusion**

As in 2000, the number of immigrants expected under the Immigration Plan was exceeded in 2001. Immigration was highly concentrated: according

Table 17. Number of Immigrants by Country of Birth and Province of Destination, Canada and Provinces, 2001

Country	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
China <sup>1</sup>	59	3	143	81	4,025	26,268	257	210	2,002	10,709	43,770
India	21	0	86	29	1,006	22,043	273	109	1,790	5,293	30,793
Pakistan	12	3	58	21	1,039	13,119	99	38	938	698	16,027
Philippines	1	1	14	9	425	7,147	697	88	1,732	3,469	13,627
South Korea	4	1	30	4	646	5,105	66	24	879	2,779	9,544
Iran	20	2	48	13	543	3,660	139	108	283	1,348	6,164
Sri Lanka	9	0	6	1	856	4,677	28	18	72	177	5,844
Romania	1	0	18	11	1,684	3,178	35	57	296	434	5,714
United States	26	20	120	59	422	2,886	120	76	519	995	5,271
Russia	9	0	29	8	628	3,507	174	12	291	532	5,193
Morocco	0	1	2	69	3,428	472	30	5	14	41	4,062
Ukraine	2	1	19	6	343	2,816	116	32	300	357	3,993
Afghanistan	0	3	20	39	570	2,277	224	142	334	335	3,944
Great Britain	32	8	92	27	193	2,161	155	73	775	916	4,440
Bangladesh	6	0	12	8	337	3,012	38	10	141	176	3,749
France	0	3	12	12	3,110	291	7	1	30	73	3,542
Algeria	0	0	0	18	2,987	296	20	0	79	38	3,438
Yugoslavia	52	16	80	30	403	1,873	147	104	259	413	3,377
Taiwan	1	0	1	4	402	636	61	8	92	1,895	3,102
Colombia	17	0	5	12	1,041	1,273	22	0	282	280	2,933
Jamaica	0	0	6	1	55	2,587	15	5	78	36	2,783
Iraq	15	4	89	5	145	1,799	78	87	275	187	2,684
Lebanon	0	0	51	3	1,128	1,067	9	12	160	51	2,481
Haiti	0	0	0	5	1,861	495	10	1	40	16	2,429
Vietnam	0	1	10	4	262	1,185	53	29	343	343	2,239
Egypt	10	1	70	8	265	1,511	17	25	127	52	2,086

<sup>1</sup> Includes Hong Kong.

Note: Data available as of November 20, 2002.

Source: Citizenship and Immigration Canada.



to place of birth, six immigrants in ten originated from Asia; according to place of destination, 60% of them settled in Ontario. The economic component of the immigration policy continued to gain ground, while the number of refugees was down slightly from 2000.

Immigration is now the main engine of Canadian population growth. According to the most recent population projections, natural increase could become negative in the early 2020s, and once that happens, immigration will be the only factor in Canada's population growth. This change is of some consequence for the distribution of the population, since international immigration tends to be concentrated in three provinces: Quebec, British Columbia and especially Ontario. If internal migration flows remain the same as at present, a small number of provinces will continue to have positive growth rates while the others will face negative population growth.

## INTERNAL MIGRATION

Table 18 shows the evolution of net migration between the provinces and territories over the past three decades. While migration patterns have shown some substantial changes over the years, the past five years have been a period of stability: for the most part, the annual changes in net migration have been minor.

For all provinces except Prince Edward Island, net migration had the same sign, either positive or negative, as in the previous year. Since 1997, with few exceptions, Ontario and Alberta have been the only provinces to have positive net migration in their exchanges with other provinces, while all the others have posted a negative figure.

The data shown in this table for 2001 are not entirely comparable with those shown for the other years. These are preliminary data obtained, in part, from information extracted from child tax benefit files, whereas for the previous years, they are final data obtained from address changes reported by taxpayers on their income tax returns. In general, compared with the final data, preliminary data overestimate inflows and outflows for each province, and the total number of interprovincial migrants is accordingly overestimated. On the other hand, figures representing the difference between the number of in-migrants and the number of out-migrants for each province are less affected by the data source. More importantly, they are not affected by a systematic bias. Thus, analysing the preliminary data is useful for identifying the most recent trends, but care must be taken not to over assess slight fluctuations that might result from the difference between sources.

*The most striking changes for 2001 are a decrease of nearly half in Ontario's positive net migration, which fell from 23,300 to 11,400 and the reduction — equally sizable, at least in relative terms — in British Columbia's negative net migration, from -14,800 to -6,300. The provinces of Newfoundland and Labrador and Quebec both reduced their migratory losses in 2001, by 1,500 and 2,900 respectively. Manitoba's net migration figure in 2001 was -5,700, a loss larger than any it has suffered in the recent past. Whereas Prince Edward Island had negative net migration in 2000, in 2001 it had its largest positive net migration since 1994. On the other hand, neighbouring Nova Scotia, in its migratory exchanges with the other provinces in 2001, had a net figure of -2,200, its largest loss since 1994. Elsewhere net migration was little changed from the previous year.*

A more detailed analysis of movements between provinces (Table 19 and 20) also shows that 2001 saw a continuation of the dynamics operating since roughly 1997 in migratory exchanges between provinces.

Table 18. Net Migration for Provinces and Territories, 1972-2001

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yuk.	N.W.T.	Nvt	Total Number of Interprovincial Migrants
1972	-189	858	2,845	241	-19,891	8,227	-7,735	-17,296	6,538	24,927	575	900	...	375,184
1973	-2,510	478	2,107	2,841	-14,730	-5,275	-2,200	-13,261	2,698	30,537	-269	-416	...	433,992
1974	-618	1,386	1,576	4,192	-11,852	-22,163	-5,400	-4,835	14,810	22,655	97	152	...	421,336
1975	915	814	4,454	7,572	-12,340	-25,057	-4,134	6,555	23,463	-2,864	242	380	...	385,330
1976	-2,732	309	361	1,640	-20,801	-10,508	-3,655	3,819	34,215	-1,490	-350	-808	...	376,970
1977	-4,009	614	-1,277	-886	-46,536	8,596	-3,789	384	32,344	15,507	57	-1,005	...	366,918
1978	-3,540	25	-109	-1,644	-33,424	415	-9,557	-3,701	31,987	20,698	-178	-972	...	348,929
1979	-4,217	-225	-1,840	-2,219	-30,025	-15,317	-13,806	-3,510	39,212	33,241	-447	-847	...	370,862
1980	-3,082	-1,082	-2,494	-4,165	-24,283	-34,919	-11,342	-4,382	46,933	40,165	-419	-930	...	372,167
1981	-6,238	-783	-2,465	-4,766	-22,549	-19,665	-3,621	-520	40,243	21,565	-1,376	175	...	380,041
1982	261	-6	1,591	2,183	-28,169	19,614	1,498	1,743	3,961	-2,019	-1,208	551	...	322,634
1983	-1,092	799	3,861	2,296	-19,080	32,825	950	2,501	-26,246	4,029	-808	-35	...	285,599
1984	-3,585	524	2,963	812	-10,943	36,691	-49	733	-30,591	3,505	-111	51	...	273,323
1985	-5,019	-13	-234	-1,559	-6,023	33,414	-1,755	-5,014	-9,568	-3,199	-445	-585	...	281,275
1986	-4,682	-493	-739	-2,897	-3,020	42,916	-3,039	-7,020	-20,293	910	179	-1,822	...	302,352
1987	-4,374	301	-2,183	-1,762	-7,410	40,278	-4,751	-9,043	-27,595	17,618	100	-1,179	...	318,890
1988	-2,154	424	71	-1,215	-7,003	14,898	-8,584	-16,338	-5,535	25,865	349	-778	...	323,685
1989	-2,606	-102	572	-21	-8,379	-1,205	-10,004	-18,589	3,366	37,367	-30	-369	...	347,990
1990	-1,137	-273	-106	1,014	-9,567	-15,117	-8,613	-15,928	11,055	38,704	-26	-6	...	332,637
1991	-1,084	-415	1,039	-79	-13,047	-9,978	-7,581	-9,499	5,511	34,572	478	83	...	315,420
1992	-2,563	232	355	-1,087	-9,785	-13,530	-6,417	-7,727	1,030	39,578	215	-220	-81	309,680
1993	-3,397	532	-1,143	-492	-7,426	-12,771	-5,206	-4,543	-2,355	37,595	-755	-43	4	283,737
1994	-6,204	694	-2,694	-505	-10,252	-4,527	-4,010	-3,958	-2,684	34,449	-245	75	-139	286,860
1995	-6,566	368	-1,972	-931	-10,248	-1,764	-3,344	-3,190	4,251	23,414	656	-440	-234	286,746
1996	-7,945	401	-1,064	-910	-15,358	-1,706	-3,738	-1,871	15,069	17,798	215	-642	-249	284,484
1997	-8,522	-241	-2,074	-1,812	-17,559	6,823	-6,717	-2,669	32,459	1,980	-558	-845	-265	291,580
1998	-7,971	-15	-1,571	-2,935	-14,512	11,466	-3,097	-1,786	40,125	-17,521	-1,114	-1,057	-12	298,164
1999	-3,916	212	947	-638	-11,712	18,424	-2,387	-7,146	19,692	-12,413	-601	-455	-7	276,489
2000	-4,884	-62	-1,393	-1,748	-11,233	23,292	-4,188	-8,301	24,397	-14,783	-654	-514	71	290,505
2001 (P)	-3,380	554	-2,229	-1,815	-8,375	11,388	-5,712	-8,461	25,056	-6,332	-296	-337	-61	303,553
Total	-107,040	5,815	-2,845	-11,295	-465,532	115,765	-151,983	-162,853	333,548	466,058	-6,727	-11,938	-973	9,847,332

(P) Preliminary data.

Note: Until 1991, Nunavut is included in the Northwest Territories.

Source: Statistics Canada, Demography Division.



While *Newfoundland and Labrador has been reducing losses in migratory exchanges* with other provinces, that province's net figure has consistently been negative since 1982. Outflow rates have remained high (24 per 1,000 in 2001). In fact, *the improvement in that province's net migration figure is due more to an increase in the number of in-migrants — from 8,100 to 9,400 between 2000 and 2001 — than to a decrease in the number of out-migrants, which went from 13,000 to 12,800*. For several years, the province has been losing in its exchanges with every other Canadian province, and this situation continued in 2001. The largest losses were in favour of Alberta (-1,100), Ontario (-1,000) and nearby Nova Scotia (-700).

In its migratory exchanges with other provinces, Prince Edward Island experienced a net gain of approximately 600 persons, a relatively large figure considering the size of that province's population. Furthermore it gained in its exchanges with all other provinces except Alberta and Manitoba.

In 2001, the migratory losses registered by Nova Scotia were relatively large compared to the level observed in past years. With a net migration figure of -2,200, the province recorded its third largest loss in two decades. Even so, it gained in its exchanges with nearly half the provinces. However, the 7,400 Nova Scotia residents who moved to Ontario and the 3,600 others who chose to settle in Alberta during the year were not replaced by a comparable number of persons moving in the opposite direction.

New Brunswick has had negative net migration every year since 1984. In 2001, the province registered a loss of 1,800 in its exchanges with the other provinces. The losses with each province were generally modest, not exceeding 750 in the case of Ontario and Alberta, but New Brunswick lost in its exchanges with all provinces except Newfoundland and Labrador and Saskatchewan, the two provinces with the highest net out-migration rates.

*For the first time since 1994, Quebec lost fewer than 10,000 persons in its migratory exchanges with the other Canadian provinces*. The mostly Francophone province owed much of the improvement in its net migration to an increase of more than 2,500 in the number in-migrants, which reached 24,600 in 2001. The number of out-migrants remained at a level comparable to the previous year. While Quebec posted slight gains in its exchanges with some provinces — Newfoundland and Labrador, New Brunswick, Manitoba and Saskatchewan — those gains paled in comparison with the net loss of nearly 7,300 that it registered in its exchanges with neighbouring Ontario. By itself, the negative balance with Ontario accounted for 87% of the losses recorded by Quebec in its migratory exchanges with other provinces.

*Ontario was the only province other than Alberta to have a sizable positive balance in its exchanges with other provinces. Nevertheless it saw its net gains decline by more than half in comparison with the previous year, from 23,300 in 2000 to 11,400 in 2001*. This industrial province, by far the most

Table 19. Annual Number of Interprovincial Migrants According to Revenue Canada Tax Files, 2000

Number of Migrants: 290 505

Province of Origin	Province of Destination												
	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nvt
Newfoundland and Labrador	...	225	2,051	701	264	5,408	152	127	3,212	536	20	158	179
Prince Edward Island	148	...	696	458	70	762	17	47	310	160	2	8	15
Nova Scotia	1,130	734	...	2,536	979	7,539	347	186	2,910	1,386	22	94	73
New Brunswick	506	406	2,559	...	2,050	4,624	207	108	1,821	675	0	51	45
Quebec	218	118	862	1,907	...	23,987	471	303	2,475	2,726	30	76	111
Ontario	3,277	640	5,493	3,346	13,362	...	3,729	1,761	11,463	14,131	109	266	228
Manitoba	169	58	440	251	535	5,194	...	2,385	5,509	3,110	31	120	116
Saskatchewan	114	78	344	73	250	2,660	2,639	...	13,228	3,238	59	141	31
Alberta	1,658	204	2,094	1,296	1,837	12,227	3,254	6,709	...	16,937	316	761	89
British Columbia	643	149	1,795	649	2,562	17,921	2,657	2,675	28,787	...	501	381	72
Yukon	29	7	32	27	47	214	35	53	697	628	...	54	9
Northwest Territories	126	7	102	35	26	326	120	155	1,264	408	81	...	188
Nunavut	131	5	75	25	69	235	102	45	103	74	7	214	...
In	8,149	2,631	16,543	11,304	22,051	81,097	13,730	14,554	71,779	44,009	1,178	2,324	1,156
Out	13,033	2,693	17,936	13,052	33,284	57,805	17,918	22,855	47,382	58,792	1,832	2,838	1,085
Net Migration	-4,884	-62	-1,393	-1,748	-11,233	23,292	-4,188	-8,301	24,397	-14,783	-654	-514	71

Source: Statistics Canada, Demography Division.

Table 20. Annual Number of Interprovincial Migrants According to Revenue Canada Tax and Child Tax Credit Files, 2001

Number of Migrants: 303 553

Province of Origin	Province of Destination												
	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nvt
Newfoundland and Labrador	...	182	1,964	756	207	5,188	188	126	3,386	584	4	106	139
Prince Edward Island	89	...	579	327	102	639	105	15	450	156	0	5	10
Nova Scotia	1,277	720	...	2,491	779	7,365	373	417	3,643	1,551	49	103	84
New Brunswick	486	447	2,552	...	2,321	4,465	290	206	1,951	853	23	30	18
Quebec	180	119	842	2,108	...	23,363	411	158	2,536	3,013	60	81	109
Ontario	4,233	846	6,156	3,713	16,103	...	5,148	1,605	12,983	15,416	222	229	158
Manitoba	136	41	408	264	447	6,439	...	2,816	6,620	3,577	41	79	96
Saskatchewan	88	35	268	219	308	2,127	2,762	...	14,901	3,528	68	107	21
Alberta	2,246	387	2,071	1,200	1,686	11,600	3,331	7,570	...	18,965	312	783	107
British Columbia	563	209	1,574	643	2,414	16,327	2,490	2,864	27,162	...	372	412	66
Yukon	17	7	72	19	0	111	41	54	428	653	...	103	20
Northwest Territories	72	26	75	48	91	340	54	112	1,145	382	75	...	188
Nunavut	63	12	62	39	147	236	59	28	109	86	3	233	...
In	9,450	3,031	16,623	11,827	24,605	78,200	15,252	15,971	75,314	48,764	1,229	2,271	1,016
Out	12,830	2,477	18,852	13,642	32,980	66,812	20,964	24,432	50,258	55,096	1,525	2,608	1,077
Net Migration	-3,380	554	-2,229	-1,815	-8,375	11,388	-5,712	-8,461	25,056	-6,332	-296	-337	-61

Source: Statistics Canada, Demography Division.



populous and situated at the centre of Canada, is also the hub of Canada's migratory exchanges. It had both the greatest number of in-migrants, with 78,200 new residents who had lived in another province the previous year, and the greatest number of out-migrants, with 66,800 Ontarians moving elsewhere in Canada during the year. Nearly a third of persons migrating to Ontario were from Quebec (23,400), a flow that greatly contributed to positive net migration. On the other hand, while 16,100 Ontarians crossed to eastern border of their province to settle in Quebec, an almost equally large number chose to settle either in British Columbia (15,400) or Alberta (13,000). Reflecting the pull that this province exerts on the population of the other provinces, Ontario registered net gains in its exchanges with all other provinces except Alberta and Prince Edward Island.

Manitoba saw more than 6,000 persons leave to settle in each of these two provinces. Manitoba was also the province with the greatest year-over-year increase in its net losses in exchanges with other provinces. The figure of -5,700 that it posted in 2001 was the most strongly negative since 1997. Except for the modest gains — less than 100 in all cases — that this province registered in its exchanges with Newfoundland and Labrador, Prince Edward Island and New Brunswick, Manitoba lost in its exchanges with all other provinces. Its net losses in exchanges with the other provinces were generally just as modest, except in the case of Alberta — with which it registered net losses of -3,300 — as well as Ontario (-1,300) and British Columbia (-1,100).

Nearly 15,000 residents of Saskatchewan moved to Alberta in 2001. Not only did they constitute the largest outflow of migrants from that province and the second largest inflow of migrants to Alberta, but they also accounted for nearly 30% of all out-migrants from Saskatchewan. In itself, the net flow of -7,300 in the direction of Alberta accounted for more than 85% of the negative balance of -8,500 that Saskatchewan registered in its exchanges with the other Canadian provinces.

In five years, between 1996 and 2001, Alberta gained more than 140,000 persons in its exchanges with other provinces. In 2001, Alberta continued to be favoured by the economic growth generated by its petroleum industry. With the net gain of 25,100 registered in 2001 in its migratory exchanges, Alberta was in a category of its own. It is by far the province that currently benefits the most from internal migration to sustain strong population growth. It registered net gains in its exchanges with all other provinces, and in many cases those gains exceeded 1,000: British Columbia (8,200), Saskatchewan (7,300), Manitoba (3,300), Ontario (1,400), Nova Scotia (1,600) and even far-off Newfoundland and Labrador (1,100).

In 2001, 27,200 persons left British Columbia to settle in Alberta, and as in the previous year, this flow was the largest of all interprovincial flows. But British Columbia's situation has greatly improved. Between 2000 and

2001, that province's negative net migration declined by 57%, from -14,800 to -6,300. In fact, were it not for the net loss of 8,200 in favour of Alberta, British Columbia would have registered a net gain in its exchanges with other provinces. Other than with Alberta, the province registered relatively modest losses only with Ontario (-900) and Prince Edward Island (-50). Gains with other provinces were in some cases sizable, such as those registered with Manitoba (1,100), Saskatchewan (700) and Quebec (600).

The three territories had negative net migration in their exchanges with other provinces in 2001. In the case of Yukon and the Northwest Territories, the losses were smaller than in the previous year.

## APPENDICES



**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

[illegible]

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	535.7	13.45	17.70	0.66	23.91	6.21	1.27	0.32	0.06	20.73	21.08	-0.35
1973	543.0	7.56	15.60	-3.17	21.84	6.25	1.81	0.50	0.13	23.87	28.48	-4.61
1974	547.1	10.37	14.94	0.25	20.92	5.97	1.88	0.50	-0.01	22.51	23.63	-1.12
1975	552.8	12.96	14.37	3.36	20.15	5.79	1.99	0.40	0.13	22.19	20.55	1.64
1976	560.0	6.55	13.89	-3.93	19.81	5.91	1.29	0.33	-0.02	17.28	22.14	-4.86
1977	563.7	5.23	14.11	-6.41	19.66	5.55	1.03	0.34	-0.01	14.41	21.51	-7.09
1978	566.7	4.56	12.97	-5.95	18.45	5.48	0.66	0.36	-0.02	14.34	20.58	-6.23
1979	569.3	3.34	12.34	-6.56	17.84	5.50	0.97	0.27	0.14	15.65	23.04	-7.40
1980	571.2	5.39	12.20	-4.38	18.04	5.84	0.94	0.19	0.24	16.18	21.56	-5.38
1981	574.2	-1.37	12.02	-10.26	17.65	5.63	0.84	0.32	0.09	14.88	25.75	-10.87
1982	573.5	7.38	10.06	0.95	15.94	5.88	0.71	0.43	0.22	18.40	17.94	0.45
1983	577.7	3.51	9.38	-2.27	15.43	6.04	0.48	0.52	-0.34	13.08	14.97	-1.89
1984	579.7	-0.84	8.70	-5.94	14.77	6.07	0.52	0.44	0.17	9.84	16.03	-6.19
1985	579.2	-3.51	8.55	-8.46	14.70	6.15	0.56	0.39	0.05	10.31	18.99	-8.68
1986	577.2	-2.77	7.91	-7.89	14.05	6.14	0.48	0.55	0.31	13.36	21.48	-8.12
1987	575.6	-1.79	7.20	-6.78	13.51	6.31	0.79	0.42	0.45	14.69	22.29	-7.61
1988	574.6	1.79	6.77	-2.78	13.02	6.24	0.71	0.28	0.53	17.43	21.18	-3.75
1989	575.6	1.50	7.02	-3.32	13.47	6.45	0.81	0.23	0.63	17.51	22.04	-4.52
1990	576.5	2.94	6.44	-1.31	13.17	6.73	0.96	0.21	-0.09	17.75	19.72	-1.97
1991	578.2	1.98	5.82	-1.15	12.38	6.56	1.10	0.45	0.08	17.02	18.89	-1.87
1992	579.3	2.48	5.38	0.15	11.93	6.55	1.36	0.40	3.61	14.05	18.46	-4.42
1993	580.8	-6.30	4.37	-7.62	11.09	6.72	1.39	0.33	-2.81	11.88	17.74	-5.87
1994	577.1	-11.37	3.99	-12.28	11.05	7.06	0.98	0.43	-2.02	10.98	21.79	-10.81
1995	570.6	-12.06	3.39	-12.34	10.33	6.94	1.01	0.38	-1.39	12.27	23.85	-11.58
1996	563.8	-14.66	3.25	-14.22	10.27	7.02	1.05	0.33	-0.73	11.74	25.93	-14.20
1997 ID	555.5	-17.56	1.99	-15.41	9.83	7.84	0.76	0.54	-0.15	12.64	28.12	-15.47
1998 ID	545.9	-17.11	1.41	-14.31	9.23	7.82	0.74	0.44	0.11	13.64	28.36	-14.73
1999 ID	536.6	-8.89	1.71	-6.33	9.46	7.75	0.79	0.53	0.74	16.01	23.34	-7.33
2000 ID	531.9	-12.26	1.00	-8.94	9.21	8.21	0.79	0.64	0.15	15.42	24.65	-9.24
2001 ID	525.4	-8.10	1.08	-7.36	9.01	7.93	0.77	0.57	-0.08	15.28	22.76	-7.48
2002 PR	521.1	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

[illegible]



**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	113.0	11.56	8.43	8.77	17.69	9.26	1.54	0.35	0.03	37.36	29.81	7.55
1973	114.3	7.96	7.55	6.00	16.44	8.89	2.38	0.58	0.03	41.96	37.79	4.17
1974	115.2	15.86	7.33	14.05	16.70	9.37	2.68	0.58	0.01	44.46	32.52	11.94
1975	117.0	10.47	7.40	8.52	16.39	8.98	2.00	0.45	0.05	39.19	32.27	6.92
1976	118.3	9.32	7.12	4.21	16.34	9.22	1.98	0.36	-0.01	36.25	33.65	2.60
1977	119.4	14.42	7.68	6.34	16.38	8.70	1.60	0.37	0.00	32.30	27.20	5.11
1978	121.1	9.57	8.14	1.02	16.31	8.17	1.19	0.38	0.00	28.62	28.42	0.21
1979	122.3	8.11	7.43	0.29	15.75	8.32	2.35	0.29	0.05	27.65	29.48	-1.83
1980	123.3	0.49	7.49	-7.39	15.88	8.39	1.54	0.24	0.08	24.58	33.36	-8.78
1981	123.3	1.73	7.33	-5.31	15.37	8.04	1.02	0.28	0.30	28.12	34.46	-6.34
1982	123.5	7.52	7.61	0.70	15.52	7.90	1.33	0.28	-0.30	27.09	27.14	-0.05
1983	124.5	12.88	6.84	6.82	15.22	8.38	0.85	0.50	0.10	26.17	19.80	6.38
1984	126.1	10.38	6.67	4.48	15.42	8.75	0.86	0.38	-0.13	24.23	20.10	4.13
1985	127.4	6.70	7.02	0.45	15.71	8.68	0.88	0.34	0.00	22.13	22.23	-0.10
1986	128.3	1.04	6.29	-2.35	15.02	8.74	1.31	0.30	0.48	19.45	23.29	-3.84
1987	128.4	5.72	6.52	3.62	15.18	8.67	1.23	0.16	0.20	23.96	21.62	2.34
1988	129.1	6.56	6.68	4.28	15.26	8.58	1.17	0.36	0.19	26.86	23.59	3.27
1989	130.0	2.46	6.52	0.32	14.88	8.37	1.21	0.35	0.25	25.70	26.48	-0.78
1990	130.3	1.45	6.68	-0.87	15.45	8.77	1.35	0.09	-0.03	21.73	23.82	-2.09
1991	130.5	0.47	5.34	-2.69	14.44	9.10	1.16	0.65	-0.02	22.13	25.31	-3.18
1992	130.5	7.43	5.62	2.44	14.12	8.50	1.15	0.59	0.11	21.59	19.82	1.77
1993	131.5	9.10	4.61	5.11	13.28	8.67	1.23	0.39	0.23	18.60	14.57	4.03
1994	132.7	9.90	4.51	6.01	12.87	8.35	1.21	0.50	0.10	20.21	15.01	5.20
1995	134.0	7.97	4.47	4.12	13.03	8.57	1.23	0.34	0.49	19.01	16.28	2.73
1996	135.1	6.14	3.14	4.52	12.50	9.36	1.14	0.14	0.57	20.12	17.16	2.96
1997 ID	136.0	0.03	4.13	-1.92	11.70	7.58	1.07	0.43	-0.78	18.65	20.43	-1.77
1998 ID	136.0	0.41	2.18	0.40	11.06	8.88	1.00	0.70	0.21	19.26	19.37	-0.11
1999 ID	136.0	3.29	2.77	2.69	11.12	8.35	1.01	0.68	0.81	18.98	17.43	1.56
2000 ID	136.5	-0.48	1.55	0.15	10.56	9.01	1.38	0.59	-0.18	19.29	19.74	-0.45
2001 ID	136.4	3.12	1.61	2.41	10.10	8.49	0.99	0.56	0.02	19.55	17.59	1.96
2002 PR	136.8	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

[illegible]

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	800.5	10.07	8.24	5.61	16.82	8.58	2.33	0.30	0.05	28.21	24.67	3.54
1973	808.6	9.52	7.83	5.44	16.36	8.53	3.14	0.46	0.17	32.31	29.72	2.59
1974	816.4	8.21	7.37	4.55	15.79	8.42	3.17	0.47	-0.08	33.15	31.23	1.92
1975	823.1	11.69	7.64	7.73	15.85	8.21	2.57	0.38	0.16	30.88	25.50	5.38
1976	832.8	6.92	7.02	2.35	15.34	8.32	2.32	0.31	-0.10	27.51	27.08	0.43
1977	838.5	4.83	6.44	-0.02	14.72	8.28	1.89	0.31	-0.08	23.69	25.21	-1.52
1978	842.6	5.73	6.71	0.60	14.85	8.14	1.16	0.33	-0.10	23.07	23.20	-0.13
1979	847.5	4.28	6.55	-0.70	14.61	8.06	1.58	0.25	0.14	21.69	23.86	-2.17
1980	851.1	3.82	6.29	-0.90	14.51	8.21	1.91	0.17	0.28	21.68	24.61	-2.92
1981	854.3	3.90	5.98	-0.88	14.11	8.13	1.64	0.33	0.69	22.51	25.39	-2.88
1982	857.7	8.52	6.25	3.21	14.31	8.06	1.46	0.29	0.20	21.87	20.03	1.85
1983	865.0	10.56	6.16	5.34	14.26	8.10	0.96	0.31	0.26	21.08	16.64	4.44
1984	874.2	9.63	6.22	4.33	14.09	7.87	1.18	0.25	0.03	19.71	16.34	3.37
1985	882.7	5.15	5.80	0.27	14.07	8.27	1.10	0.30	-0.27	18.86	19.13	-0.26
1986	887.2	4.83	5.74	0.06	13.90	8.16	1.23	0.36	0.03	19.18	20.01	-0.83
1987	891.5	3.44	5.60	-1.15	13.56	7.96	1.37	0.40	0.33	19.68	22.12	-2.44
1988	894.6	6.42	5.31	2.11	13.57	8.26	1.45	0.31	0.90	21.39	21.31	0.08
1989	900.4	7.24	5.55	2.69	13.87	8.32	1.63	0.37	0.80	22.56	21.93	0.63
1990	906.9	5.97	6.03	0.93	14.15	8.12	1.73	0.51	-0.17	20.43	20.55	-0.12
1991	912.3	5.59	5.20	1.62	13.13	7.93	1.64	0.87	-0.29	20.73	19.59	1.14
1992	917.4	5.23	4.71	1.93	12.91	8.20	2.57	0.82	-0.21	19.73	19.34	0.39
1993	922.2	4.01	4.34	1.07	12.52	8.18	3.27	0.70	-0.27	16.79	18.02	-1.24
1994	926.0	1.65	3.59	-0.55	11.98	8.38	3.75	0.95	-0.44	16.32	19.23	-2.91
1995	927.5	2.55	3.27	0.67	11.55	8.28	3.86	0.99	-0.08	16.59	18.71	-2.12
1996	929.9	2.78	3.03	1.46	11.35	8.32	3.46	0.82	-0.04	17.22	18.36	-1.14
1997 ID	932.4	0.21	2.05	0.10	10.67	8.63	3.04	1.01	0.29	16.99	19.21	-2.22
1998 ID	932.6	-0.44	1.64	-0.14	10.29	8.65	2.21	1.00	0.34	16.30	17.98	-1.68
1999 ID	932.2	2.62	2.07	2.48	10.26	8.18	1.72	0.91	0.65	17.16	16.14	1.01
2000 ID	934.7	-1.21	1.32	-0.60	9.76	8.43	1.72	1.10	0.27	17.71	19.20	-1.49
2001 ID	933.5	-0.06	1.10	-0.36	9.54	8.44	1.84	1.18	1.07	16.62	18.70	-2.08
2002 PR	933.5	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.



**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

## Numbers (in thousands)

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	646.3	9.49	10.51	1.78	18.18	7.67	2.00	0.66	0.07	28.00	27.63	0.37
1973	652.5	12.97	9.65	6.08	17.40	7.74	2.63	1.03	0.15	34.56	30.23	4.33
1974	661.0	15.19	9.37	8.55	17.18	7.81	3.31	1.05	-0.01	34.37	28.07	6.29
1975	671.1	20.67	9.79	13.56	17.38	7.59	3.09	0.84	0.15	35.63	24.46	11.17
1976	685.2	11.79	9.59	4.21	17.14	7.55	2.54	0.69	-0.03	27.47	25.09	2.38
1977	693.3	7.25	9.10	-0.31	16.55	7.45	1.66	0.70	-0.01	22.22	23.50	-1.27
1978	698.3	4.31	8.01	-2.18	15.42	7.41	0.94	0.75	-0.03	20.48	22.83	-2.35
1979	701.3	4.61	8.07	-1.94	15.43	7.36	1.63	0.57	0.16	20.29	23.44	-3.16
1980	704.6	1.77	7.57	-4.29	15.08	7.51	1.72	0.38	0.28	18.76	24.67	-5.91
1981	705.8	0.08	7.60	-5.65	14.88	7.28	1.41	0.86	0.55	19.61	26.36	-6.75
1982	705.9	8.34	7.47	2.99	14.80	7.33	1.06	0.87	-0.28	20.93	17.85	3.08
1983	711.8	8.67	7.43	3.33	14.71	7.28	0.77	0.60	-0.05	18.41	15.20	3.21
1984	718.0	6.21	7.06	1.22	14.38	7.32	0.83	0.59	-0.15	16.67	15.54	1.13
1985	722.5	2.64	6.76	-2.06	13.99	7.23	0.84	0.70	-0.04	15.94	18.09	-2.16
1986	724.4	1.57	5.97	-3.79	13.50	7.53	0.88	0.88	0.20	15.72	19.71	-4.00
1987	725.5	4.05	5.75	-2.12	13.19	7.44	0.88	0.78	0.20	18.17	20.60	-2.42
1988	728.5	5.46	5.70	-0.67	13.17	7.46	0.92	0.76	0.83	18.76	20.43	-1.66
1989	732.5	6.58	5.68	0.48	13.15	7.48	1.23	0.82	0.10	20.44	20.47	-0.03
1990	737.3	7.94	5.94	1.58	13.27	7.33	1.16	0.81	-0.14	19.13	17.76	1.37
1991	743.2	4.54	5.41	-0.16	12.75	7.34	0.93	0.87	-0.10	17.24	17.35	-0.11
1992	746.5	1.80	5.06	-1.75	12.57	7.51	1.01	1.09	-0.22	16.11	17.56	-1.45
1993	747.9	2.21	4.33	-0.61	12.09	7.75	0.95	0.75	-0.15	14.74	15.40	-0.66
1994	749.5	1.74	4.08	-0.84	11.97	7.89	0.84	0.72	-0.28	14.31	14.98	-0.67
1995	750.9	1.04	3.49	-0.96	11.40	7.90	0.86	0.56	-0.01	14.92	16.16	-1.24
1996	751.6	0.99	3.03	-0.70	10.87	7.84	0.95	0.30	-0.15	14.72	15.93	-1.21
1997 ID	752.4	-0.50	2.63	-1.90	10.53	7.90	0.88	0.54	0.17	15.20	17.61	-2.41
1998 ID	752.0	-2.47	2.10	-3.34	10.50	8.39	0.97	0.54	0.14	12.90	16.80	-3.91
1999 ID	750.1	0.86	2.05	0.05	10.15	8.09	0.88	0.66	0.67	14.70	15.55	-0.85
2000 ID	750.8	-1.44	1.68	-1.88	9.79	8.11	1.01	0.89	0.32	15.07	17.40	-2.33
2001 ID	749.7	-0.78	1.51	-1.78	9.60	8.09	1.08	0.93	0.63	14.52	17.07	-2.55
2002 PR	749.1	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

**Numbers (in thousands)**

Year	Population as of January 1	Growth			Births	Deaths	Immigration	Emigration	Non- permanent Residents (net)	Interprovincial Migration			Residual <sup>1</sup>
		Total	Natural	Migratory						In	Out	Net	
1972	6,152.9	36.7	41.3	-5.0	83.6	42.3	18.6	4.4	0.7	36.2	56.0	-19.9	0.4
1973	6,189.7	48.8	41.4	7.0	84.1	42.7	26.9	6.9	1.7	39.6	54.4	-14.7	0.4
1974	6,238.5	61.3	46.6	14.3	89.4	42.8	33.5	7.0	-0.3	39.3	51.2	-11.9	0.4
1975	6,299.8	62.3	50.2	11.8	93.6	43.4	28.0	5.7	1.7	34.5	46.8	-12.3	0.4
1976	6,362.1	52.0	53.3	3.4	96.3	43.0	29.3	4.7	-0.5	31.6	52.4	-20.8	-4.7
1977	6,414.1	11.6	52.2	-32.3	95.7	43.5	19.2	4.8	-0.3	24.4	71.0	-46.5	-8.3
1978	6,425.7	18.2	51.3	-24.8	94.9	43.6	14.3	5.2	-0.5	24.5	57.9	-33.4	-8.3
1979	6,444.0	34.4	55.3	-12.7	98.6	43.3	19.5	4.0	1.8	23.6	53.7	-30.0	-8.3
1980	6,478.4	44.5	53.9	-1.2	97.4	43.5	22.6	2.7	3.3	21.9	46.2	-24.3	-8.3
1981	6,522.8	42.5	52.6	-0.2	95.3	42.7	21.2	3.6	4.8	23.6	46.1	-22.5	-10.0
1982	6,565.3	21.8	47.3	-14.3	90.8	43.5	21.4	4.7	-2.8	19.9	48.1	-28.2	-11.2
1983	6,587.1	26.5	43.9	-6.2	88.2	44.3	16.4	5.1	1.6	22.3	41.4	-19.1	-11.2
1984	6,613.6	32.0	43.4	-0.2	87.8	44.4	14.7	4.6	0.6	25.2	36.2	-10.9	-11.2
1985	6,645.6	39.3	40.6	9.9	86.3	45.7	14.9	3.5	4.6	25.4	31.4	-6.0	-11.2
1986	6,684.9	60.5	37.7	26.1	84.6	46.9	19.5	4.3	13.9	26.0	29.0	-3.0	-3.4
1987	6,745.4	61.0	36.2	22.5	83.8	47.6	26.8	4.0	7.1	26.0	33.4	-7.4	2.3
1988	6,806.4	79.1	38.8	38.0	86.6	47.8	25.6	3.5	22.9	27.8	34.8	-7.0	2.3
1989	6,885.5	75.2	44.1	28.8	92.4	48.3	33.9	3.9	7.2	29.5	37.8	-8.4	2.3
1990	6,960.6	72.4	49.6	20.5	98.0	48.4	41.0	3.6	-7.4	26.9	36.4	-9.6	2.3
1991	7,033.0	47.3	48.2	9.4	97.3	49.1	51.9	6.7	-22.8	24.5	37.6	-13.0	-10.3
1992	7,080.3	55.7	47.3	27.6	96.1	48.8	48.8	7.8	-3.6	25.5	35.3	-9.8	-19.3
1993	7,136.0	41.2	40.7	19.8	92.4	51.7	45.0	8.0	-9.8	24.5	32.0	-7.4	-19.3
1994	7,177.1	27.9	39.2	8.0	90.6	51.4	28.1	9.5	-0.3	22.7	33.0	-10.3	-19.3
1995	7,205.0	28.6	34.7	13.2	87.4	52.7	27.2	9.0	5.3	23.1	33.4	-10.2	-19.3
1996	7,233.6	29.3	32.9	4.4	85.2	52.3	29.8	8.9	-1.1	20.8	36.2	-15.4	-8.0
1997 ID	7,263.0	23.1	25.4	-2.4	79.8	54.4	27.9	11.2	-1.6	20.4	37.9	-17.6	0.1
1998 ID	7,286.0	24.3	21.7	2.5	75.9	54.2	26.6	10.3	0.7	20.2	34.7	-14.5	0.1
1999 ID	7,310.3	30.1	19.0	11.0	73.6	54.6	29.2	9.2	2.7	20.0	31.7	-11.7	0.1
2000 ID	7,340.3	33.7	18.8	14.8	72.0	53.2	32.5	9.3	2.9	22.1	33.3	-11.2	0.1
2001 ID	7,374.1	46.1	19.5	26.6	73.7	54.2	37.6	9.0	4.4	23.2	29.6	-6.4	0.0
2002 PR	7,420.1	**	**	**	**	**	**	**	**	**	**	**	**



Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non- permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	6,152.9	5.95	6.69	-0.81	13.55	6.86	3.01	0.71	0.12	5.86	9.08	-3.22
1973	6,189.7	7.85	6.66	1.13	13.53	6.87	4.32	1.10	0.27	6.38	8.75	-2.37
1974	6,238.5	9.78	7.43	2.28	14.25	6.82	5.34	1.12	-0.04	6.27	8.16	-1.89
1975	6,299.8	9.85	7.93	1.86	14.78	6.86	4.43	0.90	0.27	5.44	7.39	-1.95
1976	6,362.1	8.14	8.35	0.53	15.08	6.73	4.58	0.73	-0.07	4.95	8.20	-3.26
1977	6,414.1	1.81	8.14	-5.04	14.91	6.77	3.00	0.74	-0.04	3.80	11.05	-7.25
1978	6,425.7	2.83	7.97	-3.85	14.74	6.77	2.22	0.80	-0.07	3.80	9.00	-5.19
1979	6,444.0	5.32	8.56	-1.96	15.27	6.70	3.02	0.61	0.28	3.66	8.30	-4.65
1980	6,478.4	6.84	8.29	-0.18	14.99	6.69	3.48	0.42	0.50	3.37	7.11	-3.74
1981	6,522.8	6.49	8.04	-0.03	14.57	6.52	3.24	0.56	0.73	3.60	7.05	-3.45
1982	6,565.3	3.32	7.19	-2.17	13.81	6.61	3.25	0.72	-0.42	3.03	7.32	-4.28
1983	6,587.1	4.02	6.65	-0.93	13.36	6.71	2.49	0.77	0.24	3.39	6.28	-2.89
1984	6,613.6	4.82	6.54	-0.03	13.25	6.70	2.22	0.69	0.09	3.81	5.46	-1.65
1985	6,645.6	5.90	6.10	1.49	12.95	6.86	2.23	0.53	0.69	3.81	4.72	-0.90
1986	6,684.9	9.01	5.62	3.89	12.60	6.98	2.90	0.64	2.08	3.87	4.32	-0.45
1987	6,745.4	9.00	5.34	3.32	12.37	7.03	3.96	0.59	1.05	3.84	4.94	-1.09
1988	6,806.4	11.55	5.67	5.55	12.65	6.98	3.74	0.51	3.35	4.07	5.09	-1.02
1989	6,885.5	10.86	6.37	4.16	13.34	6.98	4.90	0.56	1.04	4.25	5.46	-1.21
1990	6,960.6	10.35	7.09	2.93	14.01	6.92	5.87	0.51	-1.05	3.84	5.21	-1.37
1991	7,033.0	6.70	6.83	1.33	13.79	6.96	7.36	0.94	-3.24	3.48	5.32	-1.85
1992	7,080.3	7.83	6.66	3.89	13.53	6.87	6.87	1.10	-0.51	3.58	4.96	-1.38
1993	7,136.0	5.75	5.68	2.76	12.91	7.23	6.28	1.12	-1.37	3.43	4.47	-1.04
1994	7,177.1	3.88	5.45	1.11	12.60	7.14	3.91	1.32	-0.05	3.16	4.58	-1.43
1995	7,205.0	3.96	4.80	1.83	12.11	7.30	3.77	1.25	0.73	3.20	4.62	-1.42
1996	7,233.6	4.05	4.54	0.61	11.76	7.22	4.11	1.22	-0.16	2.88	5.00	-2.12
1997 ID	7,263.0	3.17	3.49	-0.32	10.97	7.48	3.84	1.53	-0.22	2.80	5.21	-2.41
1998 ID	7,286.0	3.32	2.97	0.34	10.39	7.42	3.65	1.41	0.10	2.76	4.75	-1.99
1999 ID	7,310.3	4.10	2.59	1.50	10.05	7.45	3.98	1.25	0.37	2.73	4.33	-1.60
2000 ID	7,340.3	4.58	2.56	2.02	9.79	7.23	4.42	1.26	0.39	3.00	4.52	-1.53
2001 ID	7,374.1	6.23	2.63	3.59	9.96	7.33	5.08	1.22	0.59	3.13	4.00	-0.86
2002 PR	7,420.1	••	••	••	••	••	••	••	••	••	••	••

See notes at the end of Table 1.

Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002

ONTARIO

Numbers (in thousands)

Year	Population as of January 1	Growth			Births	Deaths	Immigration	Emigration	Non- permanent Residents (net)	Interprovincial Migration			Residual <sup>1</sup>
		Total	Natural	Migratory						In	Out	Net	
1972	7,906.4	107.1	66.2	60.8	125.1	58.9	63.8	12.7	1.5	97.0	88.8	8.2	-19.9
1973	8,013.5	126.4	63.9	82.4	123.8	59.9	103.2	19.6	4.1	104.2	109.4	-5.3	-19.9
1974	8,139.9	120.3	63.7	76.6	124.2	60.6	120.1	20.2	-1.2	89.5	111.7	-22.2	-19.9
1975	8,260.2	106.3	65.2	61.1	125.8	60.6	98.5	16.4	4.1	80.9	106.0	-25.1	-19.9
1976	8,366.5	91.4	62.1	46.3	122.7	60.6	72.0	13.5	-1.7	88.7	99.2	-10.5	-17.0
1977	8,457.9	96.6	61.3	50.2	122.8	61.4	56.6	13.8	-1.2	98.6	90.0	8.6	-15.0
1978	8,554.4	71.0	59.8	26.1	121.0	61.1	42.4	15.0	-1.7	86.6	86.2	0.4	-15.0
1979	8,625.4	74.4	60.2	29.2	121.7	61.5	52.0	11.5	4.0	83.5	98.9	-15.3	-15.0
1980	8,699.8	72.4	60.6	26.9	123.3	62.7	62.4	8.2	7.6	74.2	109.1	-34.9	-15.0
1981	8,772.3	94.1	59.3	42.0	122.2	62.8	55.1	11.0	17.5	80.6	100.2	-19.7	-7.3
1982	8,866.4	117.8	61.2	58.4	124.9	63.7	53.1	14.3	-0.1	89.1	69.5	19.6	-1.7
1983	8,984.1	121.0	62.3	60.4	126.8	64.5	40.1	14.3	1.7	88.2	55.4	32.8	-1.7
1984	9,105.1	128.8	66.6	64.0	131.3	64.7	41.7	12.9	-1.6	89.1	52.4	36.7	-1.7
1985	9,233.9	129.6	65.5	65.9	132.2	66.7	40.8	11.8	3.4	88.4	54.9	33.4	-1.7
1986	9,363.5	171.5	66.0	103.7	133.9	67.9	49.7	13.6	24.7	100.1	57.1	42.9	1.7
1987	9,535.0	204.7	66.5	134.0	134.6	68.1	84.8	13.2	22.2	104.7	64.4	40.3	4.2
1988	9,739.7	234.2	67.4	162.6	138.1	70.7	88.9	11.2	70.0	91.4	76.5	14.9	4.2
1989	9,973.9	217.6	74.4	139.0	145.3	70.9	104.6	12.1	47.6	87.3	88.5	-1.2	4.2
1990	10,191.5	167.0	80.1	82.7	150.9	70.8	114.8	11.0	-6.0	75.2	90.3	-15.1	4.2
1991	10,358.5	126.8	78.6	53.0	151.5	72.9	120.1	19.6	-37.5	71.2	81.2	-10.0	-4.8
1992	10,485.3	142.8	77.4	76.7	150.6	73.2	139.2	21.9	-27.2	68.0	81.5	-13.5	-11.3
1993	10,628.0	115.5	72.0	54.8	147.8	75.9	135.0	24.8	-42.6	62.3	75.1	-12.8	-11.3
1994	10,743.5	131.3	69.6	73.0	147.1	77.5	117.6	27.9	-12.2	66.0	70.5	-4.5	-11.3
1995	10,874.8	134.8	67.8	78.3	146.3	78.5	115.9	25.7	-10.2	68.5	70.3	-1.8	-11.3
1996	11,009.6	137.1	60.9	81.9	140.0	79.1	119.7	23.9	-12.2	67.0	68.7	-1.7	-5.7
1997 ID	11,146.7	146.3	53.5	94.6	133.0	79.5	117.7	27.9	-2.0	71.1	64.3	6.8	-1.8
1998 ID	11,292.9	128.0	52.4	77.3	132.6	80.2	92.3	25.2	-1.3	73.4	62.0	11.5	-1.8
1999 ID	11,421.0	157.9	49.7	110.0	131.1	81.4	104.2	23.5	10.9	74.2	55.8	18.4	-1.8
2000 ID	11,578.8	195.4	46.1	151.1	127.4	81.3	133.5	23.8	18.1	81.1	57.8	23.3	-1.8
2001 ID	11,774.3	208.1	50.5	158.3	131.7	81.2	148.7	22.8	21.8	72.2	61.6	10.6	-0.7
2002 PR	11,982.4	..	..	..	..	..	..	..	..	..	..	..	...

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	7,906.4	13.45	8.31	7.64	15.71	7.40	8.02	1.59	0.18	12.19	11.16	1.03
1973	8,013.5	15.65	7.91	10.20	15.33	7.41	12.78	2.43	0.51	12.90	13.55	-0.65
1974	8,139.9	14.67	7.76	9.34	15.15	7.38	14.65	2.46	-0.14	10.91	13.62	-2.70
1975	8,260.2	12.79	7.84	7.34	15.13	7.29	11.84	1.98	0.49	9.74	12.75	-3.01
1976	8,366.5	10.86	7.38	5.51	14.59	7.21	8.56	1.60	-0.20	10.54	11.79	-1.25
1977	8,457.9	11.35	7.21	5.90	14.43	7.22	6.65	1.62	-0.14	11.59	10.58	1.01
1978	8,554.4	8.27	6.97	3.04	14.08	7.11	4.94	1.74	-0.20	10.08	10.03	0.05
1979	8,625.4	8.59	6.95	3.37	14.04	7.10	6.00	1.33	0.46	9.64	11.41	-1.77
1980	8,699.8	8.29	6.93	3.07	14.12	7.18	7.14	0.94	0.87	8.49	12.49	-4.00
1981	8,772.3	10.67	6.73	4.76	13.85	7.13	6.25	1.25	1.99	9.14	11.37	-2.23
1982	8,866.4	13.20	6.85	6.54	13.99	7.14	5.95	1.60	-0.01	9.99	7.79	2.20
1983	8,984.1	13.37	6.89	6.68	14.02	7.13	4.44	1.58	0.19	9.75	6.12	3.63
1984	9,105.1	14.05	7.26	6.98	14.32	7.06	4.55	1.40	-0.17	9.71	5.71	4.00
1985	9,233.9	13.94	7.04	7.08	14.22	7.18	4.38	1.26	0.37	9.50	5.91	3.59
1986	9,363.5	18.15	6.99	10.98	14.17	7.18	5.26	1.44	2.61	10.59	6.05	4.54
1987	9,535.0	21.24	6.90	13.90	13.97	7.07	8.80	1.37	2.30	10.86	6.68	4.18
1988	9,739.7	23.76	6.84	16.50	14.01	7.17	9.02	1.13	7.10	9.27	7.76	1.51
1989	9,973.9	21.58	7.38	13.78	14.41	7.03	10.38	1.20	4.72	8.66	8.78	-0.12
1990	10,191.5	16.25	7.80	8.05	14.69	6.89	11.17	1.07	-0.58	7.32	8.79	-1.47
1991	10,358.5	12.16	7.54	5.09	14.53	7.00	11.52	1.88	-3.60	6.83	7.79	-0.96
1992	10,485.3	13.52	7.33	7.26	14.27	6.93	13.19	2.07	-2.57	6.44	7.72	-1.28
1993	10,628.0	10.81	6.74	5.13	13.84	7.10	12.63	2.32	-3.99	5.83	7.03	-1.20
1994	10,743.5	12.15	6.44	6.75	13.61	7.17	10.88	2.58	-1.13	6.11	6.53	-0.42
1995	10,874.8	12.31	6.20	7.15	13.37	7.17	10.60	2.35	-0.94	6.26	6.42	-0.16
1996	11,009.6	12.37	5.50	7.39	12.64	7.14	10.81	2.15	-1.10	6.05	6.20	-0.15
1997 ID	11,146.7	13.04	4.77	8.43	11.85	7.09	10.49	2.49	-0.18	6.34	5.73	0.61
1998 ID	11,292.9	11.27	4.62	6.81	11.68	7.06	8.13	2.22	-0.11	6.46	5.46	1.01
1999 ID	11,421.0	13.73	4.32	9.56	11.40	7.08	9.06	2.04	0.95	6.46	4.85	1.60
2000 ID	11,578.8	16.74	3.95	12.94	10.91	6.96	11.43	2.04	1.55	6.95	4.95	1.99
2001 ID	11,774.3	17.52	4.25	13.33	11.09	6.84	12.52	1.92	1.83	6.08	5.19	0.89
2002 PR	11,982.4	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.



**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

[illegible]

**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	998.9	3.68	9.17	-3.34	17.38	8.22	5.26	0.94	0.08	26.09	33.82	-7.73
1973	1,002.6	9.71	8.70	3.15	16.84	8.14	6.57	1.47	0.23	33.53	35.71	-2.18
1974	1,012.4	7.04	8.74	0.41	17.04	8.30	7.31	1.51	-0.07	29.72	35.04	-5.32
1975	1,019.5	8.40	8.56	1.95	16.75	8.19	6.97	1.20	0.22	27.72	31.76	-4.04
1976	1,028.1	6.14	8.21	0.72	16.22	8.01	5.34	0.98	-0.10	24.30	27.84	-3.54
1977	1,034.5	5.12	8.23	0.16	16.12	7.89	4.88	0.99	-0.07	20.78	24.43	-3.65
1978	1,039.8	-2.40	7.80	-6.93	15.79	7.99	3.44	1.07	-0.10	17.97	27.18	-9.20
1979	1,037.3	-4.72	7.75	-9.20	15.70	7.94	4.74	0.81	0.21	18.14	31.48	-13.34
1980	1,032.4	0.34	7.31	-3.68	15.48	8.17	7.47	0.58	0.41	18.44	29.43	-10.98
1981	1,032.8	7.45	7.16	1.47	15.51	8.34	5.19	0.94	0.71	21.87	25.37	-3.49
1982	1,040.5	13.01	7.29	5.42	15.40	8.11	4.72	0.88	0.15	19.94	18.51	1.43
1983	1,054.1	11.93	7.62	4.01	15.66	8.04	3.76	1.04	0.40	17.44	16.54	0.90
1984	1,066.8	10.85	7.80	2.76	15.52	7.73	3.64	0.68	-0.16	16.00	16.05	-0.05
1985	1,078.4	8.63	7.70	0.63	15.79	8.08	3.15	0.78	-0.12	15.90	17.52	-1.62
1986	1,087.7	6.23	7.42	-0.23	15.59	8.17	3.44	1.04	0.16	15.97	18.75	-2.79
1987	1,094.5	4.60	7.51	-1.07	15.45	7.94	4.36	1.17	0.07	16.51	20.84	-4.33
1988	1,099.6	1.69	7.21	-3.68	15.47	8.27	4.54	1.02	0.61	14.65	22.45	-7.80
1989	1,101.4	1.24	7.71	-4.63	15.72	8.00	5.55	1.32	0.21	15.48	24.56	-9.08
1990	1,102.8	3.20	7.69	-2.65	15.71	8.02	6.04	1.03	0.14	15.31	23.11	-7.80
1991	1,106.3	3.29	7.53	-3.56	15.60	8.07	5.11	1.47	-0.35	14.48	21.32	-6.84
1992	1,110.0	3.78	6.84	-3.22	14.92	8.07	4.59	1.69	-0.35	14.32	20.09	-5.77
1993	1,114.2	4.57	6.64	-2.22	14.96	8.33	4.35	1.53	-0.38	13.07	17.73	-4.66
1994	1,119.3	5.04	6.53	-1.64	14.69	8.15	3.69	1.55	-0.20	13.69	17.27	-3.57
1995	1,124.9	4.73	5.72	-1.14	14.29	8.56	3.20	1.26	-0.11	13.76	16.72	-2.97
1996	1,130.3	4.16	5.28	-1.29	13.67	8.39	3.47	1.24	-0.23	12.68	15.98	-3.30
1997 ID	1,135.0	0.70	4.53	-4.03	12.91	8.38	3.27	1.62	0.23	11.60	17.52	-5.92
1998 ID	1,135.8	2.81	4.08	-1.47	12.71	8.63	2.64	1.38	-0.01	13.47	16.20	-2.72
1999 ID	1,139.0	4.82	3.90	0.72	12.54	8.64	3.26	1.00	0.55	12.27	14.36	-2.09
2000 ID	1,144.5	3.53	3.66	-0.33	12.29	8.63	4.05	0.99	0.26	11.98	15.63	-3.65
2001 ID	1,148.5	2.95	3.71	-0.85	12.17	8.46	3.99	0.98	0.51	11.68	16.05	-4.37
2002 PR	1,151.9	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

**Numbers (in thousands)**

[illegible]



**Rates (per 1,000)**

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	923.1	-10.38	8.58	-17.62	16.85	8.26	1.65	0.49	0.05	21.22	40.05	-18.83
1973	913.6	-6.64	7.86	-13.16	16.26	8.40	2.05	0.78	0.14	28.75	43.31	-14.56
1974	907.5	3.00	8.04	-3.68	16.63	8.60	2.47	0.80	-0.03	30.81	36.13	-5.32
1975	910.3	16.66	8.27	9.73	16.63	8.36	3.09	0.64	0.14	32.66	25.52	7.14
1976	925.6	13.92	8.75	6.01	17.13	8.38	2.49	0.53	-0.05	28.15	24.05	4.10
1977	938.5	11.17	9.49	2.19	17.53	8.05	2.36	0.54	-0.03	23.52	23.11	0.41
1978	949.1	5.86	9.25	-2.88	17.39	8.14	1.64	0.59	-0.05	20.27	24.16	-3.89
1979	954.7	8.38	9.99	-1.10	17.67	7.69	2.88	0.45	0.13	22.01	25.68	-3.66
1980	962.7	8.40	9.73	-0.82	17.64	7.91	3.78	0.31	0.24	21.37	25.91	-4.53
1981	970.8	11.39	9.92	1.77	17.63	7.71	2.49	0.50	0.31	23.74	24.27	-0.53
1982	981.9	12.78	9.63	3.31	17.93	8.30	2.16	0.59	-0.03	21.29	19.53	1.76
1983	994.6	13.75	10.22	3.69	17.82	7.60	1.74	0.65	0.10	19.44	16.94	2.50
1984	1,008.3	12.47	10.16	2.47	17.75	7.60	2.13	0.57	0.19	17.08	16.36	0.72
1985	1,021.0	6.17	9.89	-3.57	17.73	7.84	1.85	0.79	0.27	15.39	20.28	-4.90
1986	1,027.3	2.56	9.19	-5.18	17.03	7.84	1.81	0.52	0.36	15.48	22.30	-6.82
1987	1,029.9	-0.47	8.96	-7.06	16.54	7.58	2.06	0.69	0.35	15.25	24.03	-8.78
1988	1,029.4	-7.91	8.45	-13.98	16.35	7.90	2.15	0.59	0.39	13.30	29.24	-15.93
1989	1,021.3	-10.45	8.59	-16.64	16.39	7.80	2.11	0.67	0.22	15.02	33.32	-18.30
1990	1,010.7	-8.37	7.99	-13.94	15.99	7.99	2.37	0.59	0.11	15.99	31.82	-15.82
1991	1,002.3	-1.20	7.19	-8.25	15.28	8.08	2.45	0.82	-0.40	17.38	26.86	-9.48
1992	1,001.1	2.29	7.19	-6.38	14.97	7.78	2.52	1.06	-0.14	17.30	25.01	-7.71
1993	1,003.4	4.08	6.07	-3.46	14.19	8.12	2.39	1.05	-0.28	16.21	20.73	-4.52
1994	1,007.5	4.18	5.68	-2.96	13.90	8.23	2.24	1.04	-0.24	16.72	20.64	-3.92
1995	1,011.7	4.35	4.94	-2.05	13.31	8.38	1.92	1.03	0.20	16.70	19.85	-3.15
1996	1,016.1	2.33	4.46	-0.90	13.07	8.62	1.79	1.01	0.16	16.50	18.34	-1.84
1997 ID	1,018.5	-0.80	4.15	-1.81	12.63	8.48	1.71	1.19	0.29	16.39	19.01	-2.62
1998 ID	1,017.7	-0.60	3.81	-1.27	12.56	8.75	1.55	1.20	0.14	18.42	20.17	-1.76
1999 ID	1,017.1	-5.65	3.51	-6.02	12.43	8.92	1.70	1.19	0.51	13.73	20.78	-7.05
2000 ID	1,011.3	-7.60	3.16	-7.59	12.05	8.89	1.88	1.35	0.12	14.45	22.68	-8.24
2001 ID	1,003.7	-5.77	3.53	-7.97	12.27	8.73	1.71	1.37	0.28	13.67	22.26	-8.59
2002 PR	997.9	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**

Year	Population as of January 1	Growth			Births	Deaths	Immigration	Emigration	Non- permanent Residents (net)	Interprovincial Migration			Residual <sup>1</sup>
		Total	Natural	Migratory						In	Out	Net	
1972	1,680.0	30.9	18.6	11.9	29.3	10.7	8.4	3.3	0.3	60.5	54.0	6.5	0.4
1973	1,710.9	29.1	18.5	10.2	29.3	10.8	11.9	5.1	0.7	70.5	67.8	2.7	0.4
1974	1,739.9	42.6	18.6	23.7	29.8	11.3	14.3	5.3	-0.1	75.4	60.6	14.8	0.4
1975	1,782.6	56.6	20.2	36.0	31.6	11.4	16.3	4.4	0.7	76.7	53.2	23.5	0.4
1976	1,839.2	73.5	21.5	45.1	33.1	11.6	14.9	3.8	-0.2	83.5	49.3	34.2	6.9
1977	1,912.7	75.3	22.8	40.9	34.4	11.6	12.7	4.0	-0.1	82.8	50.5	32.3	11.6
1978	1,988.0	72.2	23.5	37.1	35.4	11.9	9.8	4.4	-0.2	82.6	50.6	32.0	11.6
1979	2,060.1	85.6	24.9	49.1	37.0	12.1	12.8	3.6	0.7	96.1	56.9	39.2	11.6
1980	2,145.7	103.0	27.0	64.4	39.7	12.7	18.9	2.7	1.2	106.7	59.8	46.9	11.6
1981	2,248.7	89.9	29.8	58.0	42.6	12.8	19.4	4.1	2.5	107.6	67.3	40.2	2.1
1982	2,338.5	43.8	32.1	16.4	45.0	13.0	18.0	5.1	-0.4	72.7	68.8	4.0	-4.7
1983	2,382.3	7.6	33.0	-20.7	45.6	12.6	10.7	5.2	0.0	45.9	72.1	-26.2	-4.7
1984	2,389.9	2.6	31.4	-24.0	44.1	12.7	10.7	4.4	0.2	39.3	69.9	-30.6	-4.7
1985	2,392.5	22.4	30.6	-3.5	43.8	13.2	9.0	4.2	1.2	49.9	59.5	-9.6	-4.7
1986	2,414.9	14.2	30.2	-12.7	43.7	13.6	9.7	4.5	2.5	49.5	69.8	-20.3	-3.3
1987	2,429.1	10.8	28.8	-15.7	42.1	13.3	12.0	4.7	4.6	45.3	72.9	-27.6	-2.3
1988	2,439.9	34.9	28.2	9.0	42.1	13.9	14.0	4.1	4.7	54.8	60.3	-5.5	-2.3
1989	2,474.8	44.5	29.5	17.3	43.4	13.9	16.2	4.1	1.9	64.7	61.3	3.4	-2.3
1990	2,519.3	52.3	28.9	25.7	43.0	14.1	19.1	4.0	-0.4	67.4	56.3	11.1	-2.3
1991	2,571.6	40.5	28.3	12.2	42.8	14.5	17.1	7.1	-3.3	61.2	55.7	5.5	0.0
1992	2,612.1	39.0	27.4	10.0	42.0	14.7	17.8	7.2	-1.6	57.0	56.0	1.0	1.6
1993	2,651.1	32.4	25.0	5.8	40.3	15.3	18.6	6.7	-3.7	49.7	52.0	-2.4	1.6
1994	2,683.5	32.3	24.2	6.5	39.8	15.6	18.0	7.0	-1.8	51.0	53.7	-2.7	1.6
1995	2,715.7	37.7	23.0	13.0	38.9	15.9	14.4	6.3	0.7	53.8	49.5	4.3	1.6
1996	2,753.4	46.3	21.5	24.2	37.9	16.4	13.9	5.8	1.1	61.2	46.1	15.1	0.6
1997 ID	2,799.7	59.9	20.5	39.6	36.9	16.5	12.8	7.4	1.7	74.5	42.0	32.5	-0.1
1998 ID	2,859.6	67.0	21.1	46.0	37.9	16.8	11.2	6.3	0.9	84.3	44.2	40.1	-0.1
1999 ID	2,926.6	48.6	21.0	27.8	38.2	17.2	12.1	5.5	1.5	68.0	48.3	19.7	-0.1
2000 ID	2,975.2	53.6	19.7	34.0	37.0	17.3	14.3	6.5	1.8	71.8	47.4	24.4	-0.1
2001 ID	3,028.8	56.8	20.0	36.8	37.6	17.6	16.4	6.8	2.6	70.5	45.9	24.6	-0.1
2002 PR	3,085.6	••	••	••	••	••	••	••	••	••	••	••	••

Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non- permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	1,680.0	18.21	10.96	7.03	17.27	6.31	4.95	1.93	0.15	35.70	31.85	3.86
1973	1,710.9	16.85	10.74	5.89	16.97	6.24	6.90	2.95	0.38	40.86	39.29	1.56
1974	1,739.9	24.21	10.54	13.45	16.93	6.39	8.11	2.99	-0.08	42.82	34.41	8.41
1975	1,782.6	31.26	11.17	19.88	17.46	6.29	8.99	2.43	0.36	42.35	29.40	12.96
1976	1,839.2	39.19	11.45	24.06	17.62	6.18	7.94	2.00	-0.12	44.51	26.27	18.24
1977	1,912.7	38.59	11.69	20.97	17.64	5.95	6.51	2.05	-0.07	42.46	25.88	16.58
1978	1,988.0	35.65	11.59	18.35	17.49	5.90	4.85	2.20	-0.11	40.79	24.98	15.80
1979	2,060.1	40.69	11.84	23.35	17.60	5.76	6.08	1.69	0.32	45.71	27.06	18.65
1980	2,145.7	46.86	12.31	29.29	18.09	5.78	8.60	1.23	0.56	48.56	27.20	21.36
1981	2,248.7	39.18	13.00	25.27	18.59	5.59	8.44	1.80	1.08	46.91	29.36	17.55
1982	2,338.5	18.55	13.59	6.95	19.08	5.49	7.61	2.16	-0.18	30.81	29.13	1.68
1983	2,382.3	3.18	13.82	-8.67	19.09	5.28	4.49	2.16	0.00	19.23	30.23	-11.00
1984	2,389.9	1.10	13.12	-10.05	18.44	5.32	4.49	1.84	0.09	16.45	29.24	-12.79
1985	2,392.5	9.31	12.72	-1.45	18.23	5.50	3.74	1.73	0.52	20.77	24.75	-3.98
1986	2,414.9	5.87	12.46	-5.22	18.06	5.60	3.99	1.85	1.02	20.44	28.82	-8.38
1987	2,429.1	4.43	11.83	-6.44	17.30	5.47	4.92	1.92	1.90	18.61	29.94	-11.33
1988	2,439.9	14.19	11.46	3.68	17.11	5.65	5.70	1.68	1.91	22.31	24.56	-2.25
1989	2,474.8	17.80	11.81	6.92	17.36	5.55	6.48	1.65	0.75	25.90	24.55	1.35
1990	2,519.3	20.55	11.37	10.10	16.89	5.53	7.50	1.59	-0.16	26.48	22.13	4.34
1991	2,571.6	15.63	10.93	4.70	16.50	5.58	6.58	2.75	-1.26	23.62	21.49	2.13
1992	2,612.1	14.83	10.40	3.81	15.97	5.58	6.76	2.75	-0.59	21.67	21.28	0.39
1993	2,651.1	12.14	9.36	2.17	15.11	5.75	6.97	2.51	-1.40	18.62	19.51	-0.88
1994	2,683.5	11.96	8.96	2.40	14.74	5.78	6.68	2.60	-0.68	18.89	19.88	-0.99
1995	2,715.7	13.78	8.42	4.77	14.23	5.81	5.25	2.30	0.26	19.67	18.12	1.55
1996	2,753.4	16.66	7.73	8.72	13.63	5.90	5.00	2.09	0.38	22.04	16.62	5.43
1997 ID	2,799.7	21.18	7.23	14.00	13.04	5.81	4.54	2.61	0.60	26.31	14.84	11.47
1998 ID	2,859.6	23.14	7.30	15.89	13.10	5.81	3.87	2.16	0.32	29.13	15.26	13.87
1999 ID	2,926.6	16.47	7.10	9.42	12.94	5.83	4.10	1.85	0.50	23.03	16.36	6.67
2000 ID	2,975.2	17.86	6.57	11.33	12.33	5.75	4.78	2.17	0.59	23.91	15.78	8.13
2001 ID	3,028.8	18.58	6.55	12.04	12.31	5.75	5.36	2.22	0.85	23.06	15.01	8.05
2002 PR	3,085.6	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.





Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non- permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	2,278.1	26.02	7.17	18.10	14.97	7.81	8.71	1.53	0.13	31.34	20.54	10.80
1973	2,338.1	30.23	6.85	22.65	14.47	7.62	11.77	2.32	0.34	36.69	23.82	12.86
1974	2,409.9	28.30	6.66	20.93	14.50	7.84	14.11	2.35	-0.09	34.43	25.17	9.27
1975	2,479.1	16.54	6.85	8.99	14.51	7.66	11.71	1.89	0.32	24.46	25.60	-1.15
1976	2,520.4	12.56	6.73	5.83	14.13	7.41	8.08	1.53	-0.13	23.37	23.96	-0.59
1977	2,552.3	16.93	7.03	10.38	14.25	7.22	5.98	1.54	-0.08	24.39	18.36	6.02
1978	2,595.8	17.31	6.94	10.84	14.22	7.28	4.71	1.65	-0.12	24.98	17.07	7.90
1979	2,641.2	24.39	7.19	17.67	14.37	7.18	6.21	1.26	0.30	28.66	16.23	12.43
1980	2,706.4	30.26	7.54	23.18	14.59	7.05	8.92	0.90	0.54	29.09	14.48	14.62
1981	2,789.6	22.92	7.66	15.49	14.70	7.04	7.83	1.14	1.16	24.94	17.30	7.64
1982	2,854.2	11.83	7.68	4.23	14.89	7.21	6.63	1.46	-0.23	15.98	16.69	-0.70
1983	2,888.2	12.91	7.94	5.05	14.76	6.82	4.98	1.51	0.19	15.11	13.73	1.39
1984	2,925.7	11.95	7.89	4.14	14.92	7.03	4.50	1.67	0.12	14.27	13.08	1.19
1985	2,960.9	9.34	7.34	2.08	14.50	7.16	4.12	1.57	0.60	14.31	15.38	-1.08
1986	2,988.7	11.41	6.90	4.39	13.96	7.06	4.18	1.58	1.50	16.47	16.17	0.30
1987	3,023.0	19.48	6.55	12.68	13.70	7.15	6.19	1.20	1.92	19.95	14.18	5.77
1988	3,082.4	24.26	6.53	17.49	13.76	7.23	7.41	0.93	2.72	21.63	13.34	8.29
1989	3,158.2	28.08	6.48	21.36	13.66	7.18	7.90	1.01	2.81	24.78	13.11	11.67
1990	3,248.1	27.36	6.69	20.43	13.85	7.16	8.85	1.02	0.85	23.80	12.05	11.75
1991	3,338.2	25.04	6.40	17.06	13.49	7.09	9.58	1.68	-1.07	22.03	11.80	10.23
1992	3,422.9	28.58	6.20	19.89	13.29	7.09	10.67	1.97	-0.21	22.63	11.24	11.40
1993	3,522.1	28.33	5.67	20.23	12.88	7.21	12.87	1.92	-1.24	21.06	10.53	10.52
1994	3,623.3	29.06	5.73	20.97	12.78	7.05	13.37	1.81	0.04	20.27	10.90	9.37
1995	3,730.1	25.45	5.41	17.75	12.39	6.98	11.81	1.61	1.35	17.76	11.56	6.20
1996	3,826.3	22.77	4.81	16.90	11.92	7.12	13.44	1.96	0.82	16.21	11.61	4.60
1997 ID	3,914.4	14.79	4.35	10.22	11.30	6.95	12.13	2.90	0.49	13.70	13.20	0.50
1998 ID	3,972.8	5.73	3.79	1.72	10.81	7.02	9.03	2.89	-0.03	11.67	16.07	-4.40
1999 ID	3,995.6	7.73	3.47	4.05	10.46	6.98	9.00	3.00	1.14	10.86	13.96	-3.09
2000 ID	4,026.6	7.07	3.27	3.58	10.07	6.80	9.26	3.16	1.14	10.89	14.55	-3.66
2001 ID	4,055.2	10.01	3.00	6.93	9.96	6.96	9.42	2.99	2.29	11.23	13.02	-1.79
2002 PR	4,096.0	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.





Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	19.7	53.78	17.17	32.32	22.25	5.08	5.72	1.92	0.15	138.94	110.57	28.37
1973	20.8	7.61	14.79	-11.34	20.10	5.31	4.31	2.97	0.19	109.42	122.29	-12.88
1974	21.0	28.53	17.91	6.53	23.27	5.36	4.70	2.73	0.00	130.67	126.11	4.56
1975	21.6	31.02	13.50	13.50	18.61	5.11	4.43	2.19	0.23	125.46	114.42	11.04
1976	22.3	12.72	14.51	-14.15	20.00	5.49	3.26	1.79	0.00	114.32	129.95	-15.62
1977	22.5	35.21	14.29	2.92	18.87	4.58	2.27	1.83	0.00	122.28	119.79	2.48
1978	23.4	25.49	15.14	-7.10	18.90	3.76	2.41	1.99	0.00	112.16	119.69	-7.53
1979	24.0	15.78	15.49	-16.81	20.75	5.26	2.86	1.37	0.21	98.53	117.04	-18.51
1980	24.3	16.79	14.18	-14.22	19.40	5.22	3.59	1.10	0.37	93.47	110.55	-17.07
1981	24.7	-22.31	16.14	-51.85	21.90	5.76	4.86	1.84	1.35	110.60	166.82	-56.22
1982	24.2	-23.20	17.01	-51.37	21.94	4.93	2.88	2.30	-1.46	67.80	118.29	-50.49
1983	23.6	-3.56	18.09	-32.96	22.88	4.79	3.09	1.44	-0.38	65.96	100.19	-34.23
1984	23.6	24.77	17.23	-3.65	21.75	4.53	1.72	0.92	0.21	66.60	71.25	-4.65
1985	24.2	8.74	14.06	-16.32	19.13	5.07	1.53	0.82	1.32	65.38	83.72	-18.34
1986	24.4	31.43	14.95	7.39	19.51	4.56	2.02	0.97	-0.89	88.51	81.28	7.23
1987	25.1	28.15	14.51	6.00	18.74	4.23	3.14	1.65	0.59	90.54	86.62	3.92
1988	25.9	36.97	14.61	14.92	19.77	5.16	2.62	0.91	-0.04	92.94	79.70	13.25
1989	26.8	24.11	14.17	2.76	17.67	3.50	3.76	0.99	1.10	85.26	86.37	-1.10
1990	27.5	23.94	15.85	1.04	19.98	4.13	3.23	1.26	0.00	79.90	80.83	-0.93
1991	28.2	38.76	15.81	19.15	19.78	3.97	3.03	2.16	1.64	81.88	65.23	16.65
1992	29.3	24.20	13.91	8.64	17.85	3.95	4.56	2.50	-0.68	78.81	71.55	7.26
1993	30.0	-10.12	12.90	-24.67	17.03	4.12	3.52	1.44	-1.44	54.87	80.17	-25.31
1994	29.7	6.88	10.68	-5.44	14.84	4.16	3.96	0.91	-0.27	60.06	68.28	-8.22
1995	29.9	35.30	10.29	23.40	15.45	5.16	3.09	2.00	0.76	75.85	54.29	21.56
1996	31.0	21.19	10.32	8.92	14.16	3.83	3.00	1.05	0.10	60.90	54.03	6.87
1997 ID	31.6	-3.93	11.12	-17.30	15.02	3.90	2.79	1.96	-0.44	51.64	69.32	-17.68
1998 ID	31.5	-24.55	8.39	-35.19	12.72	4.34	1.99	1.96	0.58	48.78	84.57	-35.80
1999 ID	30.7	-8.26	8.10	-18.69	12.51	4.41	2.58	1.67	0.03	41.91	61.54	-19.63
2000 ID	30.5	-11.55	7.06	-20.95	12.21	5.15	1.98	1.42	0.07	38.86	60.44	-21.58
2001 ID	30.1	0.27	6.97	-7.66	11.41	4.45	2.22	1.09	-0.63	40.64	48.81	-8.16
2002 PR	30.1	..	..	..	..	..	..	..	..	..	..	..

See notes at the end of Table 1.

**Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1972-2002**  
**NORTHWEST TERRITORIES (Nunavut included until 1991)**

[illegible]

Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non-permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	37.8	55.93	24.84	27.64	31.83	6.99	4.86	0.31	-0.03	113.20	90.07	23.12
1973	40.0	20.58	23.62	-6.36	29.78	6.16	4.40	0.49	0.02	88.53	98.82	-10.29
1974	40.8	31.21	20.15	7.83	25.11	4.96	4.82	0.55	-0.10	104.82	101.15	3.66
1975	42.1	38.36	22.32	12.92	27.35	5.03	4.49	0.42	0.00	100.13	91.29	8.84
1976	43.8	13.05	22.03	-14.73	26.84	4.81	4.02	0.29	-0.11	92.98	111.31	-18.33
1977	44.4	9.60	22.25	-20.24	26.74	4.49	2.74	0.31	-0.11	98.06	120.60	-22.55
1978	44.8	10.13	22.19	-19.55	26.74	4.55	2.53	0.38	-0.11	85.59	107.18	-21.59
1979	45.2	15.22	23.64	-15.84	28.14	4.50	3.05	0.29	-0.02	81.24	99.82	-18.58
1980	45.9	12.20	23.02	-18.11	28.17	5.15	2.21	0.22	0.02	72.95	93.07	-20.12
1981	46.5	36.79	23.35	6.14	27.48	4.14	1.73	0.19	0.91	89.29	85.59	3.69
1982	48.2	43.06	22.92	13.04	27.62	4.71	2.25	0.95	0.57	76.92	65.75	11.17
1983	50.4	31.02	24.43	-0.27	29.14	4.71	1.15	0.47	-0.27	66.41	67.10	-0.68
1984	52.0	31.26	22.87	1.74	27.36	4.49	1.42	0.49	-0.15	67.14	66.18	0.97
1985	53.6	18.54	22.60	-10.55	26.56	3.96	1.31	0.98	-0.07	63.17	73.98	-10.81
1986	54.6	-1.59	23.31	-32.95	27.62	4.31	1.23	0.82	0.04	56.61	90.00	-33.39
1987	54.5	12.27	24.17	-21.05	27.76	3.59	1.31	0.95	0.07	63.93	85.42	-21.49
1988	55.2	21.06	23.93	-11.87	27.88	3.94	1.34	0.50	1.24	63.21	77.16	-13.95
1989	56.4	24.70	21.55	-5.64	25.91	4.36	1.75	1.31	0.39	65.33	71.80	-6.47
1990	57.8	33.05	23.10	1.41	26.96	3.86	1.43	1.16	1.24	63.90	64.00	-0.10
1991	59.7	37.84	22.37	3.97	25.89	3.52	2.43	0.85	-0.02	67.78	65.37	2.41
1992	39.1	12.11	18.01	-6.11	21.67	3.66	2.39	1.22	-1.68	73.24	78.83	-5.60
1993	39.5	18.26	17.31	0.73	20.90	3.58	3.48	1.10	-0.58	65.19	66.27	-1.08
1994	40.3	20.49	16.73	3.56	20.25	3.51	3.32	0.74	-0.86	68.58	66.74	1.84
1995	41.1	9.25	17.99	-8.96	21.16	3.17	2.61	1.02	0.10	60.50	71.16	-10.65
1996	41.5	1.06	15.97	-13.63	19.63	3.66	2.10	0.99	0.72	57.35	72.82	-15.46
1997 ID	41.5	-7.35	14.14	-19.16	17.47	3.33	1.98	1.14	0.41	58.26	78.67	-20.42
1998 ID	41.2	-14.26	13.07	-24.96	16.63	3.57	1.29	1.25	0.81	56.64	82.46	-25.82
1999 ID	40.7	-0.22	12.23	-10.09	16.21	3.99	1.40	0.86	0.57	57.30	68.49	-11.19
2000 ID	40.6	0.12	12.70	-10.21	16.56	3.86	2.02	0.89	1.30	57.18	69.83	-12.65
2001 ID	40.6	10.96	11.01	0.93	15.00	3.99	2.28	0.91	0.51	58.85	59.80	-0.95
2002 PR	41.1	**	**	**	**	**	**	**	**	**	**	**

See notes at the end of Table 1.



Table A1. Population as of January 1 and Population Growth Components, Provinces and Territories, 1992-2002

NUNAVUT

Numbers (in thousands)

Year	Population as of January 1	Growth			Births	Deaths	Immigration	Emigration	Non- permanent Residents (net)	Interprovincial Migration			Residual <sup>1</sup>
		Total	Natural	Migratory						In	Out	Net	
1972	...	...	...	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...	...	...	...
1975	...	...	...	...	...	...	...	...	...	...	...	...	...
1976	...	...	...	...	...	...	...	...	...	...	...	...	...
1977	...	...	...	...	...	...	...	...	...	...	...	...	...
1978	...	...	...	...	...	...	...	...	...	...	...	...	...
1979	...	...	...	...	...	...	...	...	...	...	...	...	...
1980	...	...	...	...	...	...	...	...	...	...	...	...	...
1981	...	...	...	...	...	...	...	...	...	...	...	...	...
1982	...	...	...	...	...	...	...	...	...	...	...	...	...
1983	...	...	...	...	...	...	...	...	...	...	...	...	...
1984	...	...	...	...	...	...	...	...	...	...	...	...	...
1985	...	...	...	...	...	...	...	...	...	...	...	...	...
1986	...	...	...	...	...	...	...	...	...	...	...	...	...
1987	...	...	...	...	...	...	...	...	...	...	...	...	...
1988	...	...	...	...	...	...	...	...	...	...	...	...	...
1989	...	...	...	...	...	...	...	...	...	...	...	...	...
1990	...	...	...	...	...	...	...	...	...	...	...	...	...
1991	...	...	...	...	...	...	...	...	...	...	...	...	...
1992	22.5	0.7	0.6	-0.1	0.7	0.1	0.0	0.0	0.0	...	...	...	...
1993	23.2	0.8	0.6	0.0	0.7	0.1	0.0	0.0	0.0	1.0	1.0	-0.1	0.2
1994	24.0	0.7	0.7	-0.1	0.8	0.1	0.0	0.0	0.0	1.0	1.1	-0.1	0.2
1995	24.7	0.6	0.6	-0.2	0.7	0.1	0.0	0.0	0.0	0.8	1.1	-0.2	0.2
1996	25.3	0.4	0.6	-0.2	0.7	0.1	0.0	0.0	0.0	0.9	1.1	-0.2	0.1
1997	25.7	0.3	0.6	-0.3	0.7	0.1	0.0	0.0	0.0	0.9	1.2	-0.3	0.0
ID	26.1	0.5	0.5	0.0	0.7	0.1	0.0	0.0	0.0	1.0	1.0	0.0	0.0
1998	26.1	0.5	0.5	0.0	0.7	0.1	0.0	0.0	0.0	1.0	1.0	0.0	0.0
ID	26.6	0.6	0.6	0.0	0.7	0.1	0.0	0.0	0.0	1.0	1.0	0.0	0.0
1999	27.1	0.7	0.6	0.1	0.7	0.1	0.0	0.0	0.0	1.2	1.1	0.1	0.0
ID	27.8	0.4	0.6	-0.2	0.7	0.1	0.0	0.0	0.0	0.9	1.1	-0.2	0.0
2001	28.2	...	...	...	...	...	...	...	...	...	...	...	...
2002	28.2	...	...	...	...	...	...	...	...	...	...	...	...

Rates (per 1,000)

Year	Population as of January 1 (in thousands)	Growth			Birth	Death	Immigration	Emigration	Non- permanent Residents	Interprovincial Migration		
		Total	Natural	Migratory						In	Out	Net
1972	...	...	...	...	...	...	...	...	...	...	...	...
1973	...	...	...	...	...	...	...	...	...	...	...	...
1974	...	...	...	...	...	...	...	...	...	...	...	...
1975	...	...	...	...	...	...	...	...	...	...	...	...
1976	...	...	...	...	...	...	...	...	...	...	...	...
1977	...	...	...	...	...	...	...	...	...	...	...	...
1978	...	...	...	...	...	...	...	...	...	...	...	...
1979	...	...	...	...	...	...	...	...	...	...	...	...
1980	...	...	...	...	...	...	...	...	...	...	...	...
1981	...	...	...	...	...	...	...	...	...	...	...	...
1982	...	...	...	...	...	...	...	...	...	...	...	...
1983	...	...	...	...	...	...	...	...	...	...	...	...
1984	...	...	...	...	...	...	...	...	...	...	...	...
1985	...	...	...	...	...	...	...	...	...	...	...	...
1986	...	...	...	...	...	...	...	...	...	...	...	...
1987	...	...	...	...	...	...	...	...	...	...	...	...
1988	...	...	...	...	...	...	...	...	...	...	...	...
1989	...	...	...	...	...	...	...	...	...	...	...	...
1990	...	...	...	...	...	...	...	...	...	...	...	...
1991	...	...	...	...	...	...	...	...	...	...	...	...
1992	22.5	29.32	25.82	-4.11	30.72	4.90	0.83	0.88	-0.53	42.09	45.64	-3.54
1993	23.2	34.04	25.77	0.93	30.73	4.96	1.53	0.64	-0.13	40.74	40.57	0.17
1994	24.0	29.04	27.03	-5.13	31.05	4.03	0.99	0.12	-0.29	38.90	44.61	-5.71
1995	24.7	23.53	25.73	-9.16	29.57	3.84	0.40	0.20	0.00	33.97	43.33	-9.36
1996	25.3	17.56	24.58	-9.64	29.28	4.70	0.47	0.59	0.24	35.00	44.77	-9.76
1997 ID	25.7	13.39	24.12	-10.34	28.76	4.63	0.69	1.00	0.19	35.74	45.97	-10.23
1998 ID	26.1	18.76	19.94	-0.84	25.33	5.39	0.42	0.99	0.19	39.23	39.69	-0.46
1999 ID	26.6	21.26	22.71	-1.12	27.44	4.73	0.52	0.82	-0.56	37.71	37.97	-0.26
2000 ID	27.1	23.80	21.73	2.40	26.46	4.73	0.44	0.76	0.15	42.08	39.49	2.58
2001 ID	27.8	15.17	20.95	-5.64	25.34	4.39	0.43	0.79	0.21	32.77	38.27	-5.50
2002 PR	28.2	...	...	...	...	...	...	...	...	...	...	...

See notes at the end of Table 1.

Table A2. Number of Marriages and Crude Marriage Rate (per 1,000), Canada, Provinces and Territories, 1981, 1986-2000

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T. <sup>1</sup>	Nunavut	Canada
Number of Marriages														
1981	3,758	849	6,632	5,108	41,005	70,281	8,123	7,329	21,781	24,699	235	282	...	190,082
1986	3,421	970	6,445	4,962	33,083	70,839	7,816	6,820	18,896	21,826	183	257	...	175,518
1987	3,481	924	6,697	4,924	32,616	76,201	7,994	6,853	18,640	23,395	189	237	...	182,151
1988	3,686	965	6,894	5,292	33,519	78,533	7,908	6,767	19,272	24,461	209	222	...	187,728
1989	3,905	1,019	6,828	5,254	33,325	80,377	7,800	6,637	19,888	25,170	214	223	...	190,640
1990	3,791	996	6,386	5,044	32,060	80,097	7,666	6,229	19,806	25,216	218	228	...	187,737
1991	3,480	876	5,845	4,521	28,922	72,938	7,032	5,923	18,612	23,691	196	215	...	172,251
1992	3,254	850	5,623	4,313	25,841	70,079	6,899	5,664	17,871	23,749	221	209	...	164,573
1993	3,163	885	5,403	4,177	25,021	66,575	6,752	5,638	17,860	23,447	180	216	...	159,317
1994	3,318	850	5,373	4,219	24,986	66,693	6,585	5,689	18,096	23,739	169	241	...	159,958
1995	3,404	877	5,329	4,252	24,238	67,583	6,703	5,799	18,044	23,597	207	218	...	160,251
1996	3,194	924	5,392	4,366	23,968	66,208	6,448	5,671	17,283	22,834	197	206	...	156,691
1997	3,227	876	5,177	4,089	23,958	64,535	6,261	5,707	17,254	21,845	167	144	66	153,240
1998	3,150	882	5,134	4,063	22,940	64,533	6,437	5,740	17,813	21,749	167	134	79	152,742
1999	3,400	932	5,481	4,147	22,910	66,110	6,627	5,919	18,223	21,622	161	117	93	155,649
2000	3,412	961	5,517	4,447	24,912	65,426	6,471	5,717	18,063	22,086	154	137	89	157,303
Crude Marriage Rate (per 1,000)														
1981	6.54	6.86	7.76	7.23	6.26	7.98	7.84	7.51	9.49	8.75	9.83	5.93	...	7.66
1986	5.93	7.55	7.25	6.84	4.93	7.51	7.16	6.63	7.77	7.27	7.48	4.70	...	6.72
1987	6.05	7.19	7.50	6.76	4.81	7.90	7.28	6.64	7.65	7.67	7.35	4.31	...	6.89
1988	6.41	7.46	7.68	7.25	4.90	7.98	7.18	6.58	7.85	7.85	7.85	3.99	...	7.01
1989	6.77	7.83	7.55	7.15	4.81	7.95	7.07	6.51	7.97	7.87	7.89	3.91	...	6.99
1990	6.56	7.63	7.02	6.82	4.58	7.78	6.93	6.18	7.77	7.66	7.85	3.87	...	6.78
1991	6.00	6.72	6.39	6.06	4.09	6.99	6.34	5.91	7.18	7.02	6.78	5.56	...	6.15
1992	5.61	6.49	6.12	5.76	3.63	6.63	6.20	5.64	6.78	6.84	7.31	5.30	...	5.80
1993	5.45	6.69	5.85	5.57	3.49	6.23	6.04	5.60	6.69	6.56	5.88	5.41	...	5.55
1994	5.77	6.36	5.80	5.62	3.47	6.16	5.86	5.63	6.69	6.45	5.62	5.93	...	5.51
1995	5.99	6.51	5.74	5.66	3.35	6.16	5.93	5.72	6.59	6.24	6.70	5.25	...	5.46
1996	5.70	6.78	5.79	5.80	3.30	5.96	5.68	5.56	6.22	5.88	6.17	4.92	...	5.28
1997	5.82	6.40	5.54	5.42	3.28	5.74	5.51	5.58	6.08	5.52	5.18	3.45	2.54	5.11
1998	5.78	6.44	5.48	5.39	3.13	5.67	5.66	5.60	6.13	5.44	5.30	3.26	2.99	5.05
1999	6.29	6.77	5.82	5.49	3.12	5.73	5.80	5.77	6.16	5.37	5.18	2.86	3.46	5.10
2000	6.34	6.95	5.85	5.89	3.37	5.59	5.64	5.59	6.00	5.44	5.03	3.35	3.24	5.11

<sup>1</sup> Nunavut included from 1981 to 1996.

Source: Statistics Canada, Health Statistics Division and Demography Division.



Table A3. Age-specific First Marriage Rates (per 1,000) by Age, Sex and Year of Birth, Canada

MALES

Age	Year of Birth																																		
	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	
	Year of 17th Birthday																																		
17	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
18	1.3	1.3	1.3	1.4	1.4	1.6	1.7	1.7	1.8	2.2	2.3	2.3	2.7	2.6	2.7	2.8	3.3	3.6	3.9	4.4	5.9	6.6	8.3	9.3	10.7	12.6	14.6	17.8	19.0	20.0	21.2	18.4	17.9	17.2	16.9
19		3.4	3.8	3.6	4.2	4.6	5.0	5.1	5.2	5.8	5.8	6.5	7.1	7.4	8.0	8.2	9.0	10.0	11.0	13.0	16.0	19.0	21.8	24.2	27.6	31.3	35.2	39.6	42.8	45.9	46.7	42.4	41.7	39.8	
20			7.3	7.9	8.4	8.8	8.9	10.0	10.8	10.5	12.4	13.8	15.1	16.5	16.8	17.0	19.4	21.4	23.8	28.0	33.6	38.6	42.5	47.3	51.2	56.3	59.0	67.7	73.4	77.5	79.7	73.7	73.6		
21				13.1	13.6	14.2	15.0	16.1	18.0	18.7	18.9	21.1	23.1	26.6	29.0	28.7	29.4	32.2	36.7	40.3	45.7	52.2	58.0	64.1	68.1	71.6	75.5	78.2	90.9	94.6	103.6	110.6	110.3		
22					19.8	21.3	21.8	22.9	23.7	26.6	27.8	28.2	30.6	34.9	38.3	40.5	41.2	41.6	45.5	50.4	54.5	59.0	65.7	69.2	75.9	78.4	79.1	81.7	86.0	96.2	104.1	112.1	120.1		
23						27.1	28.6	29.5	31.1	33.7	35.7	36.6	37.7	39.9	45.3	50.6	50.7	51.9	53.1	55.3	60.6	63.7	64.6	69.7	72.7	76.9	76.4	77.6	79.5	81.6	90.6	95.5	104.0		
24							34.8	36.3	37.8	38.9	40.8	43.9	44.8	45.0	48.5	51.6	51.7	57.2	57.9	57.5	59.3	63.4	64.5	65.3	66.2	68.0	69.7	69.2	68.6	69.3	70.6	77.9	82.7		
25								41.2	43.2	44.3	44.7	47.8	48.5	49.7	49.4	51.1	54.5	59.0	60.4	58.5	56.8	57.0	59.6	60.2	57.8	59.0	50.1	49.9	50.8	50.0	48.7	47.8	46.4	47.4	
26									44.6	46.2	46.3	47.1	47.2	49.6	49.6	48.9	48.9	51.4	55.0	55.3	53.8	49.5	49.8	52.4	50.1	49.9	50.8	50.0	48.7	40.8	39.8	38.6	37.3		
27										45.5	46.6	45.9	44.2	45.2	45.8	46.1	44.3	44.8	45.8	49.2	48.2	46.6	44.4	42.8	44.2	42.7	40.6	40.8	40.8	39.8	38.6	37.3			
28											42.8	42.8	40.9	40.7	41.3	41.2	40.1	38.6	39.3	39.3	42.5	40.9	39.0	36.3	34.6	35.9	34.5	33.8	33.1	32.4	31.6	30.6			
29												38.5	37.9	36.4	36.4	35.8	35.7	34.0	33.7	33.1	33.8	35.3	34.2	32.8	30.7	28.8	29.9	28.6	28.0	26.6	26.5	25.4	24.1		
30													33.5	33.2	31.5	30.6	29.9	30.0	28.9	28.3	28.3	27.4	29.1	28.2	26.6	25.0	23.7	23.4	22.7	22.2	21.1	20.3			
31														29.0	27.7	25.7	25.0	24.5	24.9	23.9	23.1	22.9	22.8	23.3	22.1	21.1	20.0	17.6	18.5	18.0	17.4	16.3			
32															23.6	23.4	21.7	20.7	20.4	20.3	19.5	19.0	18.2	18.4	18.0	17.5	15.8	14.6	14.9	14.8	13.1	12.9			
33																19.4	18.4	17.3	16.8	16.6	16.1	15.7	15.6	14.8	15.1	15.0	14.4	13.9	12.9	11.7	11.8	11.3			
34																	16.0	15.0	14.1	13.7	14.1	13.7	12.9	12.6	12.1	11.9	12.6	11.9	11.6	10.2	9.3	9.5	8.8		
35																		13.4	13.0	12.0	11.8	11.8	11.1	10.7	10.0	10.0	9.7	9.9	9.7	9.6	8.6	7.5	7.7		
36																			11.2	10.2	9.9	9.7	8.9	8.9	8.3	8.4	8.2	8.0	7.9	8.0	7.3	7.1	6.5		
37																				9.3	8.3	8.3	7.9	7.4	7.2	6.9	6.5	6.3	6.4	6.6	6.6	6.1	5.4		
38																					7.7	7.1	6.9	6.3	6.1	5.9	5.8	5.5	5.3	5.0	5.3	5.1	5.0		
39																						6.3	5.7	5.3	5.1	5.2	4.9	4.6	4.5	4.4	4.3	4.0	4.3		
40																							5.4	5.0	4.6	4.4	4.2	4.1	3.9	3.5	3.3	3.2	3.4		
41																								4.1	3.7	3.6	3.2	3.5	3.3	3.0	2.9	2.6	2.7		
42																									3.7	3.4	3.0	3.0	2.7	2.5	2.3	2.3	2.3	2.0	
43																										2.9	2.7	2.5	2.2	2.1	1.9	1.7	1.7	1.7	
44																											2.6	2.2	2.0	1.6	1.6	1.6	1.6	1.6	1.5
45																																			1.5

Sources: Statistics Canada, Health Statistics Division and Demography Division.

Table A3. Age-specific First Marriage Rates (per 1,000) by Age, Sex and Year of Birth, Canada - Concluded

FEMALES

Age	Year of Birth																																		
	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951
	Year of 15th Birthday																																		
15	0.0																																		
16	0.5																																		
17		1.3																																	
18			6.2																																
19				12.2																															
20					19.2																														
21						26.7																													
22							34.9																												
23								42.5																											
24									47.7																										
25										50.9																									
26											49.3																								
27												45.2																							
28													39.7																						
29														33.1																					
30															26.7																				
31																21.2																			
32																	16.6																		
33																		13.4																	
34																				11.1															
35																					9.2														
36																						7.4													
37																							5.8												
38																								4.7											
39																									4.2										
40																										3.4									
41																											2.8								
42																												2.3							
43																													1.8						
44																														1.7					
45																															1.1				

Sources: Statistics Canada, Health Statistics Division and Demography Division.

**Table A4. Number of Divorces and Mean Duration (in years) of Marriages for Divorced Persons Divorced in the Year, Canada, Provinces and Territories, 1981, 1986, 1989-2000**

Year	Nfld. Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T. <sup>2</sup>	Nunavut	Canada
Number of Divorces														
1981	569	187	2,285	1,334	19,193	21,680	2,399	1,932	8,418	9,533	75	66	..	67,671
1986	687	199	2,609	1,729	19,026	27,549	2,982	2,479	9,556	11,299	94	95	..	78,304
1989	1,005	248	2,527	1,649	19,829	31,298	2,912	2,460	8,237	10,658	82	93	..	80,998
1990	1,016	281	2,419	1,699	20,474	28,977	2,798	2,364	8,489	9,773	81	92	..	78,463
1991	912	269	2,280	1,652	20,274	27,694	2,790	2,240	8,388	10,368	67	86	..	77,020
1992	867	227	2,304	1,633	19,695	30,463	2,657	2,325	8,217	10,431	117	98	..	79,034
1993	930	227	2,376	1,606	19,662	28,903	2,586	2,239	8,612	10,889	94	102	..	78,226
1994	933	249	2,286	1,570	18,224	30,718	2,746	2,354	8,174	11,437	97	92	..	78,880
1995	982	260	2,294	1,456	20,133	29,352	2,677	2,320	7,599	10,357	112	94	..	77,636
1996	1,060	237	2,228	1,450	18,078	25,035	2,603	2,216	7,509	10,898	115	99	..	71,528
1997	822	243	1,983	1,373	17,478	23,629	2,625	2,198	7,185	9,692	101	79	..	67,408
1998	944	279	1,933	1,473	16,916	25,149	2,443	2,246	7,668	9,827	117	93	..	69,088
1999	892	291	1,954	1,671	17,144	26,088	2,572	2,237	7,931	9,935	112	83	..	70,910
2000	913	272	2,054	1,717	17,054	26,148	2,430	2,194	8,176	10,017	68	94	7	71,144
Mean Duration (in years) of Marriages for Divorced Persons <sup>1</sup>														
1981	11.8	12.4	11.3	11.8	11.8	11.9	11.0	10.5	10.5	11.7	11.2	9.0	..	11.5
1986	11.7	12.5	11.3	11.8	11.5	11.7	11.1	10.7	10.9	12.1	11.8	10.9	..	11.5
1989	11.7	11.5	11.3	11.5	11.0	11.3	10.3	10.8	11.0	11.5	11.5	10.5	..	11.2
1990	11.3	11.9	11.3	11.1	10.8	11.2	10.5	10.6	11.0	11.5	11.4	10.1	..	11.1
1991	11.4	12.8	11.0	11.4	11.0	10.9	10.3	10.8	10.8	11.3	11.1	9.0	..	11.0
1992	10.9	12.0	11.2	11.0	10.7	10.9	10.4	10.6	10.8	11.1	10.7	9.3	..	10.9
1993	11.7	11.8	10.9	11.5	10.5	10.8	10.4	10.6	10.6	10.9	10.6	10.0	..	10.7
1994	11.3	12.4	11.0	11.1	10.6	10.6	10.4	10.5	10.8	10.7	10.8	10.7	..	10.7
1995	11.2	12.1	11.1	11.5	10.4	10.8	10.5	10.6	10.8	10.6	10.1	10.1	..	10.8
1996	11.3	12.2	11.3	11.5	10.4	11.0	10.5	10.6	10.5	10.6	10.2	10.0	..	10.9
1997	12.0	11.7	11.4	11.4	10.7	10.9	10.5	10.3	10.7	10.7	11.0	9.3	..	10.8
1998	12.2	12.7	11.6	11.3	10.4	10.8	10.5	10.6	10.8	10.7	10.8	10.6	..	10.9
1999	12.1	12.6	12.1	11.9	10.6	10.8	10.6	10.8	10.8	10.6	10.7	10.9	..	10.9
2000	12.1	12.1	12.0	11.7	10.5	10.9	10.8	10.5	11.0	10.7	11.5	13.3	..	10.9

<sup>1</sup> Excludes divorces for marriages of a duration greater than 25 years.

<sup>2</sup> Nunavut included from 1981 to 1999.

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.





Year	Number of Marriages per Year	Marriage Cohort	Number of Marriages	Marriage Duration (in years)																									Year of Observation	T.D.R. <sup>1</sup>	
				0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			25
1975	198,085	1974-75	198,455	6	52	104	147	199	224	242	233	214	185	163	171	196	150	139	130	110	110	102	93	90	82	77	70	71	68	2000	3,548
1976	193,343	1975-76	195,714	8	59	111	161	217	251	246	227	194	165	195	207	165	152	131	119	113	112	103	98	86	80	76	75	70			
1977	187,344	1976-77	190,344	8	63	116	162	227	250	240	208	180	200	225	181	158	143	125	117	113	105	100	88	82	77	74	74				
1978	185,523	1977-78	186,434	7	65	123	175	235	250	221	200	230	248	196	175	155	135	130	116	107	107	90	80	82	83	79					
1979	187,811	1978-79	186,667	8	58	132	185	226	226	211	252	274	211	185	164	148	140	126	118	114	97	88	85	90	84						
1980	191,069	1979-80	189,440	7	65	135	176	206	210	268	297	227	207	184	165	148	142	131	118	105	92	92	96	90							
1981	190,082	1980-81	190,576	8	71	133	154	190	269	316	250	218	189	179	161	150	134	129	110	105	96	99	93								
1982	188,360	1981-82	189,221	9	65	118	144	260	326	263	232	216	190	177	160	153	135	119	104	103	98	100									
1983	184,675	1982-83	186,518	8	64	109	209	322	273	247	219	197	183	172	158	140	128	111	109	109	99										
1984	185,597	1983-84	185,136	8	63	150	270	263	253	237	209	202	184	171	151	135	117	112	110	107											
1985	184,096	1984-85	184,847	8	72	212	249	260	251	226	219	201	187	170	146	123	122	122	120												
1986	175,518	1985-86	179,807	10	103	217	265	263	246	237	222	203	182	163	143	140	130	127													
1987	182,151	1986-87	178,835	20	106	216	251	255	251	235	218	196	171	149	140	135	132														
1988	187,728	1987-88	184,940	19	106	214	248	254	243	237	216	175	158	150	149	138															
1989	190,640	1988-89	189,184	19	109	208	265	268	256	231	193	170	168	161	153																
1990	187,737	1989-90	189,189	17	113	230	272	270	257	213	181	178	171	158																	
1991	172,251	1990-91	179,994	19	120	232	276	274	232	205	200	186	176																		
1992	164,573	1991-92	168,412	21	121	242	270	246	216	212	203	184																			
1993	159,317	1992-93	161,945	22	132	236	246	228	221	217	193																				
1994	159,958	1993-94	159,638	22	129	222	230	241	234	214																					
1995	160,251	1994-95	160,105	20	113	203	241	252	237																						
1996	156,691	1995-96	158,471	16	106	218	239	252																							
1997	153,306	1996-97	154,999	16	112	215	249																								
1998	152,821	1997-98	153,064	15	110	225																									
1999	155,742	1998-99	154,282	17	111																										
2000	157,392	1999-00	156,567	14																											

<sup>1</sup> Total Divorce Rate.  
Sources: Statistics Canada, Health Statistics Division and Demography Division.

Table A6. Number of Live Births and Total Fertility Rate (for 1,000 Women), Canada, Provinces and Territories, 1986-2000

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nvt.	Canada
Number of Live Births														
1986	7,618	1,928	12,358	9,788	84,634	133,882	17,009	17,513	43,744	41,967	483	830	677	372,431
1987	7,468	1,955	12,110	9,588	83,791	134,617	16,953	17,034	42,110	41,814	478	843	680	369,441
1988	6,435	1,977	12,182	9,617	86,612	138,066	17,030	16,763	42,055	42,930	521	853	702	375,743
1989	7,026	1,937	12,533	9,667	92,373	145,338	17,321	16,651	43,351	43,769	480	819	660	391,925
1990	6,787	2,014	12,870	9,824	98,048	150,923	17,352	16,090	43,004	45,617	556	902	682	404,669
1991	7,166	1,885	12,016	9,497	97,310	151,478	17,282	15,304	42,776	45,612	568	911	723	402,533
1992	6,918	1,850	11,874	9,389	96,146	150,593	16,590	15,004	42,039	46,156	529	852	702	398,643
1993	6,421	1,754	11,568	9,049	92,391	147,848	16,709	14,269	40,292	46,026	508	834	725	388,394
1994	6,339	1,716	11,099	8,978	90,578	147,068	16,480	14,038	39,796	46,998	442	824	756	385,114
1995	5,859	1,754	10,726	8,563	87,417	146,263	16,113	13,499	38,914	46,820	470	874	739	378,016
1996	5,747	1,694	10,573	8,176	85,226	140,012	15,478	13,300	37,851	46,138	443	815	747	366,200
1997	5,416	1,591	9,952	7,922	79,774	133,004	14,655	12,860	36,905	44,577	474	723	745	348,598
1998	4,994	1,504	9,595	7,885	75,856	132,618	14,461	12,777	37,905	43,072	396	681	667	342,418
1999	5,055	1,515	9,575	7,615	73,596	131,080	14,315	12,604	38,171	41,939	383	659	737	337,249
2000	4,869	1,441	9,116	7,347	72,007	127,408	14,090	12,140	37,006	40,672	370	673	727	327,882
Total Fertility Rate (for 1,000 Women)														
1986	..	1,790	1,580	1,531	1,372	1,598	1,823	2,015	1,842	1,612	1,952	2,844	..	1,592
1987	..	1,824	1,547	1,511	1,358	1,574	1,824	1,975	1,811	1,606	1,900	2,854	..	1,572
1988	..	1,856	1,564	1,529	1,418	1,584	1,844	1,989	1,834	1,637	1,992	2,906	..	1,600
1989	..	1,827	1,617	1,551	1,518	1,620	1,909	2,050	1,898	1,650	1,863	2,703	..	1,654
1990	..	1,942	1,674	1,590	1,631	1,666	1,943	2,074	1,886	1,693	2,176	2,804	..	1,710
1991	1,442	1,851	1,585	1,554	1,650	1,660	1,969	2,043	1,894	1,683	2,154	2,442	3,538	1,703
1992	1,402	1,847	1,588	1,556	1,664	1,676	1,927	2,045	1,871	1,672	1,933	2,284	3,391	1,706
1993	1,317	1,764	1,570	1,530	1,633	1,661	1,963	1,981	1,815	1,635	1,896	2,223	3,433	1,678
1994	1,337	1,731	1,537	1,549	1,637	1,659	1,967	1,976	1,813	1,640	1,726	2,233	3,492	1,678
1995	1,279	1,784	1,515	1,506	1,612	1,660	1,951	1,920	1,794	1,610	1,809	2,353	3,420	1,662
1996	1,304	1,737	1,518	1,462	1,605	1,603	1,896	1,901	1,744	1,550	1,676	2,231	3,365	1,623
1997	1,272	1,642	1,452	1,438	1,530	1,529	1,820	1,844	1,689	1,484	1,836	2,017	3,355	1,555
1998	1,219	1,566	1,419	1,455	1,480	1,532	1,820	1,826	1,710	1,448	1,616	1,972	2,975	1,540
1999	1,269	1,586	1,429	1,422	1,453	1,521	1,813	1,817	1,707	1,417	1,598	1,917	3,232	1,526
2000	1,256	1,517	1,374	1,390	1,435	1,474	1,796	1,761	1,639	1,382	1,619	1,998	3,127	1,488

Sources: Statistics Canada, Health Statistics Division and Demography Division.



Table A7. Total Fertility Rate by Birth Order and Fertility Rate by Age Group (for 1,000 Women), Canada, Provinces and Territories, 1998-2000

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T.	Nvt.	Canada
Total Fertility Rate By Birth Order (for 1,000 Women)														
1998: 1	598.4	650.4	651.1	675.0	683.6	679.6	756.6	687.7	717.4	672.9	686.9	786.8	835.2	685.7
2	448.0	561.8	511.7	543.6	539.0	551.8	561.7	594.6	592.5	515.4	633.9	544.5	739.4	547.5
3	131.0	248.9	180.6	173.6	178.1	207.3	281.4	313.6	254.6	180.1	202.9	358.8	479.5	205.6
4	27.9	78.8	51.7	45.4	53.0	60.9	124.4	129.0	87.9	53.5	71.5	156.8	388.1	64.5
5 +	13.2	26.5	24.0	17.2	26.1	32.6	95.3	101.5	58.2	25.7	21.3	125.3	532.7	36.6
1999: 1	615.2	697.2	665.3	671.5	682.2	683.3	758.2	674.1	721.9	666.2	754.7	765.6	970.7	687.6
2	481.4	552.7	511.9	506.7	523.0	542.6	557.7	607.7	582.7	499.0	563.5	580.9	537.2	537.2
3	123.9	239.3	173.7	181.1	171.9	204.5	284.2	309.6	254.2	175.9	204.2	279.4	658.7	202.5
4	35.9	67.9	54.1	46.7	49.6	59.2	115.9	129.2	90.5	50.5	49.6	169.3	390.2	62.9
5 +	12.6	28.6	24.5	15.7	26.0	31.8	97.3	96.7	58.0	25.3	25.5	121.4	559.1	36.2
2000: 1	608.0	658.9	635.1	655.5	684.1	670.5	714.1	658.6	698.4	636.9	738.1	815.6	908.0	673.6
2	476.9	551.4	471.6	508.6	503.3	518.5	578.8	568.5	557.1	488.9	581.7	600.1	756.3	518.2
3	126.6	215.4	190.4	167.6	172.2	195.6	284.4	290.5	240.6	177.8	206.6	297.7	476.3	197.5
4	30.3	71.2	52.6	42.3	49.3	58.4	117.6	136.4	86.0	53.3	63.2	149.9	389.4	62.6
5 +	13.7	20.0	24.6	16.5	26.2	31.1	101.2	107.2	57.4	25.5	29.5	134.6	597.3	36.5
Fertility Rate By Age Group (for 1,000 Women)														
1998: 15-19	20.4	29.7	24.0	26.4	14.9	17.2	38.7	38.0	25.4	16.1	28.7	54.8	137.9	19.8
20-24	57.8	72.5	66.0	71.7	63.7	54.6	85.4	94.0	76.1	58.2	88.6	109.8	187.8	63.2
25-29	83.2	99.6	94.2	103.9	108.3	97.4	115.6	121.2	110.5	91.0	86.0	97.3	127.6	101.5
30-34	61.7	75.5	71.2	65.1	77.2	91.9	85.9	79.2	90.7	82.4	72.0	90.4	92.0	84.6
35-39	17.1	29.9	24.3	20.5	26.3	38.6	33.0	26.4	32.8	35.5	38.3	36.0	41.6	32.8
40-44	2.3	4.3	3.6	2.2	4.1	6.4	4.4	4.0	5.3	5.9	7.2	3.8	10.3	5.2
45-49	0.1	0.2	0.1	0.2	0.1	0.3	0.2	0.3	0.2	0.2	0.0	1.6	1.8	0.2
1999: 15-19	20.1	22.4	21.9	23.5	14.6	15.9	35.6	36.8	24.5	15.4	28.1	57.4	135.5	18.7
20-24	56.5	73.7	64.7	71.8	60.6	52.5	86.1	89.8	75.4	53.8	75.2	97.6	202.7	60.9
25-29	88.3	103.7	94.8	99.7	105.8	96.4	112.8	122.3	108.9	87.9	87.4	106.0	162.5	100.0
30-34	65.3	80.8	73.5	66.5	77.0	93.6	88.6	81.0	91.1	83.9	77.0	77.5	88.1	85.8
35-39	19.8	30.7	26.6	19.8	27.3	39.0	33.2	27.7	34.8	35.9	39.7	36.6	41.9	33.6
40-44	2.7	4.1	3.7	2.2	4.1	6.8	5.5	4.3	5.8	6.3	9.4	8.8	20.4	5.5
45-49	0.1	0.0	0.2	0.0	0.1	0.3	0.1	0.1	0.3	0.2	0.8	1.7	1.7	0.2
2000: 15-19	19.5	23.5	18.6	22.0	13.7	14.2	33.5	35.1	22.5	13.9	28.9	58.4	122.1	17.2
20-24	56.8	70.9	60.9	71.3	59.5	50.4	83.4	86.0	69.8	49.3	79.2	102.1	187.9	58.3
25-29	86.8	94.7	90.7	94.9	103.5	91.7	113.9	118.7	104.2	86.9	84.4	98.9	170.1	96.8
30-34	66.6	82.5	73.8	66.0	77.8	92.1	89.8	78.6	89.7	81.9	76.2	86.0	90.3	85.1
35-39	19.0	26.5	26.1	20.8	27.1	39.2	33.1	28.1	35.4	37.3	45.9	43.1	39.7	33.9
40-44	1.5	4.9	4.1	2.2	4.4	7.2	5.2	4.6	5.9	7.0	4.8	9.2	12.9	5.9
45-49	0.1	0.0	0.3	0.0	0.1	0.3	0.1	0.3	0.1	0.3	0.0	0.8	3.2	0.2

Sources: Statistics Canada, Health Statistics Division and Demography Division.

Table A8. Number of Total Deaths and Infant Deaths (age less than one year), Canada, Provinces and Territories, 1981, 1986, 1989-2000

Year	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta	B.C.	Yukon	N.W.T. <sup>1</sup>	Nvt.	Canada
	Number of Deaths													
1981	3,230	992	6,958	5,139	42,684	62,838	8,648	7,523	12,823	19,857	141	196	...	171,029
1986	3,540	1,121	7,255	5,458	46,892	67,865	8,911	8,061	13,560	21,213	113	119	116	184,224
1989	3,718	1,089	7,516	5,496	48,305	70,907	8,819	7,920	13,854	22,997	95	140	109	190,965
1990	3,884	1,143	7,388	5,426	48,420	70,818	8,863	8,044	14,068	23,577	115	124	103	191,973
1991	3,798	1,188	7,255	5,469	49,121	72,917	8,943	8,098	14,451	23,977	114	135	102	195,568
1992	3,798	1,114	7,544	5,609	48,824	73,206	8,980	7,793	14,679	24,615	117	144	112	196,535
1993	3,890	1,145	7,559	5,806	51,711	75,853	9,299	8,164	15,338	25,764	123	143	117	204,912
1994	4,050	1,114	7,770	5,917	51,365	77,487	9,148	8,308	15,613	25,939	124	143	98	207,076
1995	3,935	1,153	7,687	5,938	52,734	78,479	9,658	8,495	15,895	26,375	157	131	96	210,733
1996	3,928	1,268	7,751	5,896	52,336	79,099	9,497	8,765	16,391	27,536	120	152	120	212,859
1997	4,318	1,030	8,044	5,944	54,399	79,541	9,511	8,637	16,452	27,412	123	138	120	215,669
1998	4,230	1,207	8,068	6,305	54,181	80,184	9,815	8,905	16,795	27,978	135	146	142	218,091
1999	4,139	1,137	7,640	6,074	54,592	81,393	9,860	9,044	17,206	28,017	135	162	127	219,526
2000	4,339	1,229	7,878	6,088	53,172	81,277	9,892	8,956	17,273	27,460	156	157	130	218,007
	Infant Deaths (age less than 1 year)													
1981	98	25	139	114	807	1,073	191	203	452	424	8	28	...	3,562
1986	65	13	104	81	604	969	157	157	393	355	12	10	18	2,938
1989	64	12	73	69	632	985	115	134	325	360	2	7	17	2,795
1990	70	12	81	71	612	946	138	123	346	344	4	3	16	2,766
1991	56	13	69	58	578	953	111	126	285	298	6	7	13	2,573
1992	49	3	71	59	522	886	113	110	304	286	2	9	17	2,431
1993	50	16	82	65	529	922	118	115	268	264	4	5	10	2,448
1994	52	11	67	48	506	878	115	125	294	297	1	10	13	2,417
1995	46	8	52	41	477	870	123	123	274	280	6	8	13	2,321
1996	38	8	59	40	396	802	104	112	236	237	0	4	15	2,051
1997	28	7	44	45	444	728	110	114	178	210	4	5	11	1,928
1998	31	12	44	51	425	667	97	91	183	183	2	12	13	1,811
1999	25	10	38	38	361	705	120	79	220	160	1	8	11	1,776
2000	24	5	45	25	340	708	92	82	243	150	1	6	9	1,730

<sup>1</sup> Nunavut included in 1981.

Source: Statistics Canada, Health Statistics Division.

**Table A9. Life Expectancy at Different Ages, Canada, 1971 to 2000**

Age	1971	1976	1981	1986	1991	1996	1997	1998	1999	2000 <sup>1</sup>
Males										
0	69.6	70.5	72.0	73.3	74.6	75.4	75.8	76.0	76.3	76.7
1	70.0	70.5	71.8	72.9	74.1	74.9	75.2	75.5	75.8	76.1
5	66.3	66.7	68.0	69.1	70.2	71.0	71.3	71.5	71.9	72.2
10	61.4	61.9	63.1	64.1	65.3	66.1	66.4	66.6	66.9	67.2
15	56.6	57.0	58.2	59.2	60.4	61.1	61.4	61.7	62.0	62.3
20	52.0	52.4	53.6	54.5	55.7	56.4	56.6	56.9	57.2	57.5
25	47.4	47.8	49.0	49.8	51.0	51.6	51.9	52.1	52.4	52.8
30	42.7	43.2	44.3	45.1	46.2	46.9	47.1	47.4	47.6	48.0
35	38.0	38.5	39.5	40.4	41.5	42.2	42.4	42.6	42.9	43.2
40	33.4	33.8	34.9	35.7	36.9	37.5	37.7	37.9	38.1	38.5
45	29.0	29.3	30.3	31.1	32.2	32.8	33.0	33.2	33.5	33.8
50	24.7	25.1	25.9	26.6	27.7	28.3	28.5	28.7	28.9	29.2
55	20.8	21.1	21.8	22.4	23.4	24.0	24.1	24.3	24.5	24.8
60	17.1	17.5	18.1	18.5	19.4	19.9	20.0	20.1	20.4	20.7
65	13.9	14.2	14.7	15.0	15.8	16.1	16.2	16.3	16.5	16.8
70	11.1	11.3	11.7	11.9	12.6	12.7	12.8	12.9	13.1	13.3
75	8.6	8.8	9.1	9.2	9.7	9.8	9.8	9.9	10.0	10.3
80	6.6	6.7	6.9	7.0	7.4	7.3	7.3	7.3	7.5	7.7
85	5.0	5.2	5.2	5.2	5.5	5.4	5.3	5.4	5.5	5.7
90	3.9	4.3	4.0	3.8	4.3	3.9	3.9	4.0	4.0	4.2
Females										
0	76.6	77.8	79.2	80.0	81.0	81.2	81.3	81.5	81.7	82.0
1	76.8	77.7	78.8	79.5	80.4	80.6	80.7	80.9	81.1	81.4
5	73.0	73.9	75.0	75.7	76.5	76.7	76.8	77.0	77.2	77.4
10	68.1	69.0	70.1	70.7	71.6	71.8	71.9	72.0	72.2	72.5
15	63.2	64.1	65.1	65.8	66.6	66.8	66.9	67.1	67.3	67.5
20	58.4	59.3	60.3	60.9	61.8	61.9	62.0	62.2	62.4	62.6
25	53.6	54.4	55.4	56.0	56.9	57.0	57.1	57.3	57.5	57.7
30	48.7	49.5	50.5	51.1	52.0	52.1	52.2	52.4	52.5	52.8
35	43.9	44.7	45.7	46.3	47.1	47.3	47.3	47.5	47.7	47.9
40	39.2	40.0	40.9	41.5	42.3	42.4	42.5	42.6	42.8	43.1
45	34.6	35.3	36.2	36.7	37.5	37.7	37.7	37.9	38.1	38.3
50	30.1	30.8	31.6	32.1	32.9	33.0	33.1	33.2	33.4	33.6
55	25.7	26.4	27.2	27.7	28.4	28.5	28.5	28.6	28.8	29.1
60	21.6	22.3	23.0	23.4	24.1	24.1	24.2	24.3	24.4	24.7
65	17.7	18.3	19.0	19.4	20.0	20.0	20.0	20.1	20.3	20.5
70	14.0	14.6	15.3	15.6	16.1	16.1	16.1	16.2	16.3	16.5
75	10.8	11.4	12.0	12.1	12.6	12.5	12.5	12.6	12.7	12.9
80	8.1	8.5	9.0	9.2	9.5	9.4	9.4	9.4	9.5	9.7
85	5.9	6.4	6.7	6.7	7.0	6.8	6.7	6.7	6.8	7.0
90	4.5	4.9	4.9	4.9	5.1	4.8	4.7	4.7	4.8	5.0

<sup>1</sup> Calculated by using the average of deaths in 1999 and twice those of 2000, to reduce the annual variations.

**Sources:** Statistics Canada, Health Statistics Division and Demography Division.



Table A10. Landed Immigrants in Canada by Country of Birth, 1981, 1986, 1991-2001

	1981	1986	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>Asia</b>	<b>50,894</b>	<b>42,295</b>	<b>123,425</b>	<b>143,066</b>	<b>149,836</b>	<b>143,259</b>	<b>130,547</b>	<b>145,498</b>	<b>139,751</b>	<b>102,783</b>	<b>113,395</b>	<b>140,545</b>	<b>156,238</b>
Afghanistan	48	584	1,395	1,223	972	849	1,483	2,001	2,307	2,083	2,269	3,159	3,944
Bangladesh	98	473	1,105	1,622	1,269	1,341	1,970	2,754	3,270	2,117	2,010	3,040	3,749
China <sup>1</sup>	13,829	8,477	37,567	50,667	47,043	57,075	45,848	49,133	42,559	29,173	33,883	40,942	43,770
South Korea	1,504	1,203	2,610	3,787	3,816	3,015	3,506	3,250	4,107	4,955	7,209	7,611	9,544
India	9,427	7,451	14,300	14,305	21,757	18,574	18,263	23,391	21,718	16,988	18,840	28,196	30,793
Iran	1,409	2,128	6,688	7,103	4,170	3,010	4,078	6,255	7,891	7,008	6,201	5,916	6,164
Iraq	305	316	996	2,174	3,321	2,253	2,414	2,769	2,567	1,898	2,036	2,303	2,684
Lebanon	1,043	2,419	12,225	6,664	4,804	2,724	2,167	1,895	1,469	1,352	1,568	1,897	2,481
Pakistan	823	632	2,788	3,751	4,510	4,400	4,667	8,558	12,178	8,441	9,586	14,868	16,027
Philippines	5,986	4,200	12,730	13,803	20,548	19,493	15,820	13,626	11,412	8,636	9,536	10,637	13,627
Sri Lanka	368	1,827	7,158	12,945	9,476	7,085	9,360	6,441	5,345	3,542	4,934	6,065	5,844
Taiwan	705	638	4,295	7,077	9,379	7,006	7,415	12,738	12,782	6,996	5,325	3,409	3,102
Vietnam	8,241	6,221	8,892	7,865	8,392	6,509	4,178	2,712	2,011	1,832	1,622	1,954	2,239
Others	7,108	5,726	10,676	10,080	10,379	9,925	9,378	9,975	10,135	7,762	8,376	10,548	12,270
<b>Europe</b>	<b>44,817</b>	<b>22,448</b>	<b>46,891</b>	<b>43,627</b>	<b>45,699</b>	<b>38,067</b>	<b>40,302</b>	<b>39,195</b>	<b>37,945</b>	<b>37,546</b>	<b>38,779</b>	<b>42,543</b>	<b>42,554</b>
Germany	2,075	1,342	1,574	1,411	1,659	1,364	1,589	1,761	1,561	1,665	1,911	1,649	1,421
Bosnia-Herzegovina	0	0	0	344	2,738	4,717	4,179	2,473	2,202	2,545	2,454	813	659
France	1,681	1,113	2,631	3,114	3,350	2,521	3,037	2,436	2,308	3,022	3,180	3,561	3,542
Great Britain	18,920	4,606	6,444	5,920	5,953	4,769	4,567	4,381	3,923	3,283	3,778	3,777	4,440
Greece	927	549	626	597	539	341	246	238	211	145	158	170	152
Ireland	851	477	639	490	418	317	226	260	226	173	167	166	211
Italy	2,058	781	782	671	696	533	505	486	465	369	389	356	386
Poland	4,094	5,271	15,801	11,940	6,944	3,572	2,453	2,168	1,793	1,521	1,371	1,398	1,224
Portugal	1,838	1,973	5,189	2,648	1,622	773	781	672	677	406	329	377	438
Romania	1,004	998	2,599	3,314	3,786	3,595	4,342	3,952	4,048	3,112	3,583	4,588	5,714
Russia	0	1	24	194	925	1,454	2,129	3,198	4,277	4,818	4,441	4,877	5,193
Ukraine	0	0	19	126	873	1,440	1,842	2,676	2,645	2,762	2,833	3,566	3,993
Others	11,369	5,337	10,563	12,858	16,196	12,671	14,406	14,494	13,609	13,725	14,185	17,245	15,181

	1981	1986	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>Africa</b>	<b>5 915</b>	<b>5 175</b>	<b>16 634</b>	<b>20 238</b>	<b>17 563</b>	<b>14 215</b>	<b>15 495</b>	<b>15 846</b>	<b>15 309</b>	<b>14 514</b>	<b>16 429</b>	<b>20 697</b>	<b>24 239</b>
South Africa	1 238	795	948	1 139	1 668	2 464	1 475	1 350	1 763	1 416	1 433	1 717	1 885
Algeria	128	111	913	852	751	649	1 113	2 042	1 795	2 255	2 369	2 853	3 438
Egypt	767	631	1 941	1 640	1 660	2 320	2 718	2 374	2 043	1 307	1 247	1 376	2 086
Ethiopia	152	991	2 569	2 274	1 924	1 271	950	1 042	813	655	745	1 166	1 154
Somalia	9	58	3 268	5 554	3 660	1 730	2 077	1 428	1 158	1 386	1 599	1 473	1 095
Others	3 621	2 589	6 995	8 779	7 900	5 781	7 162	7 610	7 737	7 495	9 036	12 112	14 581
<b>North and Central America</b>	<b>10 184</b>	<b>12 382</b>	<b>19 097</b>	<b>18 835</b>	<b>14 427</b>	<b>8 772</b>	<b>7 267</b>	<b>8 552</b>	<b>7 928</b>	<b>6 880</b>	<b>7 830</b>	<b>8 263</b>	<b>8 475</b>
United States	8 696	6 090	5 324	5 975	6 482	5 154	4 328	5 054	4 405	4 167	4 913	5 140	5 271
Mexico	397	673	1 150	1 200	1 154	786	764	1 247	1 689	1 383	1 683	1 657	1 933
Others	1 091	5 619	12 623	11 660	6 791	2 832	2 175	2 251	1 834	1 330	1 234	1 466	1 271
<b>Caribbean and Bermuda</b>	<b>8 805</b>	<b>8 869</b>	<b>13 113</b>	<b>15 234</b>	<b>16 753</b>	<b>10 071</b>	<b>10 090</b>	<b>9 395</b>	<b>8 235</b>	<b>6 408</b>	<b>6 812</b>	<b>7 162</b>	<b>8 458</b>
Haiti	3 704	1 729	2 851	2 433	3 688	2 124	2 037	1 977	1 657	1 316	1 449	1 650	2 429
Jamaica	2 688	4 665	5 135	6 060	6 117	3 951	3 640	3 308	2 870	2 270	2 364	2 464	2 783
Trinidad and Tobago	949	921	2 982	4 347	4 216	2 342	2 584	2 205	1 760	1 197	1 186	919	931
Others	1 464	1 554	2 145	2 394	2 732	1 654	1 829	1 905	1 948	1 625	1 813	2 129	2 315
<b>South America</b>	<b>6 126</b>	<b>6 530</b>	<b>10 514</b>	<b>10 313</b>	<b>9 546</b>	<b>7 955</b>	<b>7 519</b>	<b>6 020</b>	<b>5 590</b>	<b>4 911</b>	<b>5 584</b>	<b>6 786</b>	<b>8 531</b>
Guyana	3 024	3 977	3 370	3 059	3 548	4 275	3 974	2 392	1 842	1 277	1 388	1 335	1 738
Others	3 102	2 553	7 144	7 254	5 998	3 680	3 545	3 628	3 748	3 634	4 196	5 451	6 793
<b>Australasia</b>	<b>1024</b>	<b>451</b>	<b>742</b>	<b>931</b>	<b>1017</b>	<b>741</b>	<b>676</b>	<b>696</b>	<b>625</b>	<b>515</b>	<b>579</b>	<b>661</b>	<b>869</b>
<b>Oceania</b>	<b>726</b>	<b>383</b>	<b>1 626</b>	<b>1 780</b>	<b>1 334</b>	<b>1 049</b>	<b>680</b>	<b>636</b>	<b>472</b>	<b>397</b>	<b>380</b>	<b>476</b>	<b>656</b>
<b>Others and not stated</b>	<b>303</b>	<b>810</b>	<b>735</b>	<b>831</b>	<b>575</b>	<b>266</b>	<b>296</b>	<b>219</b>	<b>176</b>	<b>224</b>	<b>161</b>	<b>234</b>	<b>423</b>
<b>TOTAL</b>	<b>128 794</b>	<b>99 343</b>	<b>232 777</b>	<b>254 855</b>	<b>256 750</b>	<b>224 395</b>	<b>212 872</b>	<b>226 057</b>	<b>216 031</b>	<b>174 178</b>	<b>189 949</b>	<b>227 367</b>	<b>250 443</b>

<sup>1</sup> Hong Kong included.

**Note:** Preliminary data as of November 20, 2002.

**Source:** Citizenship and Immigration Canada.

**Table A11. Population (in thousands) as of July 1, by Age and Sex, Canada, 1999, 2000, 2001**

Age	Males			Females		
	1999	2000	2001	1999	2000	2001
0	172.8	172.3	167.3	164.6	163.9	158.5
1	177.1	174.3	174.2	170.0	166.5	166.1
2	186.0	178.5	176.2	175.4	171.4	168.3
3	198.4	187.3	180.3	190.3	176.7	173.3
4	201.9	199.8	189.2	191.3	191.5	178.5
5	203.7	203.4	201.7	193.4	192.7	193.4
6	208.0	205.2	205.3	197.7	194.8	194.6
7	213.2	209.4	207.1	203.6	198.9	196.6
8	215.9	214.4	211.0	205.1	204.6	200.5
9	216.8	217.1	216.0	206.2	206.3	206.2
10	209.5	218.2	218.7	199.1	207.3	207.6
11	203.7	210.6	219.8	193.9	200.2	208.7
12	205.8	204.9	212.3	195.9	194.9	201.7
13	210.2	207.1	206.6	198.6	196.9	196.3
14	211.8	211.2	208.7	199.3	199.5	198.2
15	210.3	213.0	213.0	199.4	200.4	201.0
16	210.0	211.7	214.8	199.1	200.7	202.2
17	210.2	211.5	213.7	199.8	200.9	202.9
18	213.5	212.1	214.0	203.0	201.8	203.4
19	214.3	215.9	215.7	203.2	205.8	205.7
20	211.7	216.0	218.4	201.0	205.9	209.1
21	209.3	213.4	218.4	199.2	203.8	209.2
22	210.5	211.2	215.8	202.0	201.7	206.8
23	211.4	212.8	213.6	203.2	204.4	204.5
24	211.4	213.6	215.4	204.3	205.5	207.3
25	205.8	213.5	216.0	200.2	206.6	208.6
26	207.9	207.8	216.1	202.6	202.6	209.9
27	211.9	210.3	210.7	207.3	205.0	206.0
28	221.6	214.6	213.7	217.4	210.0	208.5
29	224.5	224.4	218.1	218.7	219.9	213.5
30	222.8	227.2	228.0	218.3	221.5	223.2
31	223.5	225.6	230.5	220.0	220.9	224.9
32	229.9	226.0	228.9	225.9	222.6	224.3
33	244.0	231.6	228.9	239.1	227.9	225.7
34	262.4	245.7	233.7	256.9	241.0	230.1
35	272.6	264.0	247.8	266.2	258.6	243.2
36	276.1	274.1	265.8	270.9	267.8	260.6
37	270.7	277.5	276.1	266.7	272.2	269.6
38	272.7	271.4	279.0	270.5	267.6	273.9
39	269.9	273.2	272.3	268.4	271.2	268.7
40	263.9	270.2	273.9	264.3	269.0	272.1
41	262.9	263.9	270.8	261.7	264.7	269.8
42	257.7	263.1	264.3	257.5	262.0	265.2
43	250.0	257.7	263.5	250.7	257.8	262.4
44	248.4	250.0	258.0	248.9	250.7	258.1
45	239.6	248.3	250.4	241.9	248.9	251.0
46	229.5	239.6	248.7	231.7	241.9	249.2



**Table A11. Population (in thousands) as of July 1, by Age and Sex, Canada, 1999, 2000, 2001 - Concluded**

Age	Males			Females		
	1999	2000	2001	1999	2000	2001
47	222.1	229.4	239.6	222.4	231.6	242.1
48	217.9	221.9	229.4	218.1	222.3	231.7
49	213.8	217.4	221.7	214.0	217.8	222.1
50	209.6	213.3	217.0	210.9	213.6	217.6
51	210.2	209.0	212.8	210.8	210.7	213.4
52	209.2	209.3	208.3	210.7	210.5	210.4
53	179.5	208.4	208.6	181.3	210.4	210.3
54	167.3	178.6	207.5	168.8	180.9	210.2
55	162.9	166.4	177.8	165.3	168.5	180.7
56	157.8	161.9	165.5	160.4	164.9	168.2
57	146.4	156.8	161.1	149.4	159.9	164.4
58	140.1	145.4	155.8	144.1	149.0	159.6
59	132.4	139.1	144.4	136.5	143.6	148.7
60	128.6	131.3	138.0	133.0	136.1	143.3
61	123.9	127.5	130.2	128.2	132.5	135.6
62	119.0	122.7	126.3	123.9	127.7	132.0
63	118.5	117.6	121.4	124.0	123.4	127.2
64	114.9	117.1	116.2	121.0	123.3	122.7
65	111.9	113.2	115.5	117.8	120.2	122.5
66	112.4	109.9	111.2	119.9	116.8	119.2
67	111.8	110.2	107.7	119.6	118.7	115.6
68	109.0	109.4	107.8	119.7	118.3	117.4
69	104.4	106.3	106.8	116.7	118.1	116.9
70	97.8	101.6	103.6	112.2	115.1	116.5
71	94.6	94.8	98.6	111.1	110.5	113.4
72	89.0	91.5	91.8	108.1	109.2	108.6
73	85.3	85.9	88.4	107.6	105.9	107.0
74	80.5	82.0	82.6	104.9	105.3	103.5
75	75.2	77.0	78.5	101.5	102.3	102.7
76	70.0	71.6	73.4	97.0	98.8	99.6
77	66.0	66.2	67.8	94.5	94.1	95.8
78	60.2	62.3	62.5	88.4	91.4	90.9
79	53.4	56.4	58.4	81.3	85.1	88.1
80	43.7	49.9	52.9	69.6	78.2	81.9
81	38.6	40.3	46.4	63.0	66.5	75.0
82	35.0	35.4	36.9	59.6	59.7	63.1
83	31.5	31.8	32.0	55.6	56.1	56.1
84	28.9	28.0	28.2	52.9	51.7	52.2
85	24.7	25.7	24.7	47.2	49.0	47.7
86	20.6	21.7	22.6	41.5	43.4	45.1
87	16.6	18.0	19.1	35.5	37.9	39.7
88	13.3	14.3	15.7	30.4	31.8	34.1
89	10.8	11.2	12.1	25.5	27.0	28.2
90 +	32.5	34.6	36.9	93.8	98.7	104.5
Total	15,107.4	15,247.0	15,405.8	15,401.9	15,543.9	15,704.8

**Source:** Statistics Canada, Demography Division.

## GLOSSARY\*

**Age:** Age at last birthday (in years).

**Aging (of a Population):** An increase of the percentage of old persons in the total population.

**Birth Cohort or Generation:** Unless otherwise specified, refers here to a group of persons born within the 12-month period between January 1<sup>st</sup> and December 31<sup>st</sup> of a given year.

### Census Coverage

*Net undercoverage:* Difference between undercoverage and overcoverage.

*Overcoverage:* Number of persons who should not have been counted in the census or who were counted more than once.

*Undercoverage:* Number of persons not enumerated in a census (who were intended to have been enumerated).

**Census Metropolitan Area (CMA):** The general concept of a census metropolitan area (CMA) is one of a very large *urban area*, together with adjacent *urban* and *rural areas* which have a high degree of economic and social integration with that urban area.

A Census Metropolitan Area is delineated around an urban area (called the *urbanized core* and having a population of at least **100,000 (based on the previous census)**). Once an area becomes a CMA, it is retained in the program even if its population subsequently declines.

CMAs are comprised of one or more *census subdivisions (CSDs)* which meet at least one of the following criteria:

- (1) the CSD falls completely or partly inside the urbanized core;
- (2) at least 50% of the employed labour force *living* in the CSD *works* in the urbanized core; or
- (3) at least 25% of the employed labour force *working* in the CSD *lives* in the urbanized core (**1991 Census Dictionary**, Catalogue no. 92-351-XPE, page 181).

**Cohort:** Represents a group of persons who have experienced a specific demographic event during a given period which can be a year. Thus, the married cohort of 1996 consists of the number of persons who married in 1996. Persons born within a specified year could be referred to as a generation.

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\* For further information consult the following: International Union for the Scientific Study of Population (1980). **Multilingual Demographic Dictionary**, Ordina Editions, Liège and Van de Walle, Étienne. **The Dictionary of Demography**, ed. Christopher Wilson. Oxford, England, New York, New York, United States of America.

**Cohort, fictitious:** An artificial cohort created from portions of actual cohorts present at different successive ages in the same year.

**Common-law Union:** Union consisting of a male and a female living together as husband and wife, without being legally married.

**Components of Demographic Change:** Any of the classes of events generating population movement or variations. Births, deaths, migration, marriages, divorces and new widowhoods are the components responsible for the change in total population or in the age, sex and marital status distribution of the population.

**Current index:** An index constructed from measurements of demographic phenomena and based on the events reflecting those phenomena during a given period, usually a year. For example, life expectancy in 1996 is a current index in the sense that it indicates the average number of years a person would live if he or she experienced 1996 conditions throughout his or her life.

**Dependency Ratio:** The total population can be divided up into three broad age groups: 0-17 (children), 18-64 (adults) and 65 and over (older persons). The following ratios may be defined on the basis of this classification:

- (a) child dependency ratio: The number of children per adult (18-64);
- (b) age dependency ratio: The number of aged persons per adult (18-64);
- (c) total dependency ratio: The sum of the child and the aged dependency ratios.

**Error of Closure:** Difference between the postcensal estimate and the population adjusted for net undercoverage according to a census for the same date.

**Fertility:** Relates the number of live births to the number of women, couples or, very rarely, men.

**Infant mortality:** Mortality of children less than a year old.

**Intensity:** Frequency of occurrence of an event among members of a given cohort.

**Intercensal:** The period between two censuses.

**International Migration:** Movement of population between Canada and a foreign country which involves a change in residence. A distinction is made between *landed immigrants*, *returning Canadians* from other countries who settle in Canada, *emigrants* and the net change in *non-permanent residents*.

**Interprovincial Migration:** Movement from one province to another involving a permanent change in residence. A person who takes up residence in another province is an *out-migrant* with reference to the province of origin, and an *in-migrant* with reference to the province of destination.

**Life expectancy:** A statistical measure derived from the life table that indicates the average years of life remaining for a person at a specified age, if the current age-specific mortality rates prevail for the remainder of that person's life.



**Legal Marital Status:** Indicates the conjugal status, that is whether single, married, widowed or divorced.

*Single:* Includes persons who have never been married and all persons under 15 years of age.

*Married:* Includes persons legally married and persons legally married and separated.

*Widowed:* A person whose spouse has died and who has not remarried.

*Divorce:* A person who has obtained a legal divorce and who has not remarried.

**Mean Age:** The mean age of a population is the average age of all its members.

**Median Age:** The median age is an age “x”, such that exactly one half of the population is older than “x” and the other half is younger than “x”.

**Natural Increase:** A change in population size over a given period as a result of the difference between the numbers of births and deaths.

**Neonatal mortality:** Mortality in the first month after birth (part of infant mortality).

**Net migration:** Difference between immigration and emigration for a given area and period of time.

**Non-permanent Residents:** The five following groups are referred to as non-permanent residents:

- persons residing in Canada claiming refugee status;
- persons residing in Canada who hold a student authorization (foreign students, student visa holders);
- persons residing in Canada who hold an employment authorization (foreign workers, work permit holders);
- persons residing in Canada who hold a Minister’s permit;
- all non-Canadian born dependents of persons claiming refugee status, or of persons holding student authorizations, employment authorizations or Minister’s permits and living in Canada.

**Parity:** A term used in reference to a woman or a marriage to denote the number of births or deliveries by the woman or in the marriage. A two-parity woman is a woman who has given birth to a second-order child.

**Population:** Estimated population and population according to the census are both defined as being the number of Canadians whose usual place of residence is in that area, regardless of where they happened to be on Census Day. Also included are any Canadians staying in a dwelling in that area on Census Day and having no usual place of residence elsewhere in Canada, as well as those considered “non-permanent residents”.

**Population Estimate:**

***Preliminary, Updated and Final Postcensal:*** Population estimates produced by using data from the most recent census adjusted for net census undercoverage and estimates of the components of demographic change since that last census.

***Intercensal:*** Population estimate derived by using postcensal estimates and data from the most recent census counts adjusted for net undercount preceding and following the year in question.

**Population Growth:** A change, either positive or negative, in population size over a given period.

**Population movement:** Gradual change in population status over a given period attributable to the demographic events that occur during the period. Movement here is not a synonym for migration.

**Population Projection:** The projection differs from the estimate in that its objective is to establish what the evolution of the population will be in the future by size, geographical distribution and other demographic characteristics using selected hypotheses. A reference is made to a projection when the formulated hypotheses appear to be highly probable. Generally, population projections are restricted to a short term period.

**Post-neonatal mortality:** Mortality between the ages of one month and one year.

**Prevalence:** Number of cases existing at one point in time.

**Probability of survival:** Probability of a survivor of exact age  $x$  surviving at least to age  $x+n$ . Its notation is  ${}_n p_x$  and it is the complement of the probability of dying ( $1 - {}_n q_x$ ).

**Proportion ever married:** A measure of the prevalence of marriage in a generation or a fictitious cohort. It is usually equivalent to the proportion remaining single at an age such as 50 after which first marriages are rare.

**Rate:**

***Age-Specific Fertility:*** Ratio of the number of births occurring in a given age group to the number of females of a given age (per 1,000).

***Birth:*** Refers to a rate calculated by relating the number of live births observed in a population during a given period to the size of the population during that period (per 1,000).

***Divorce:*** Refers to the number of divorces per 1,000 population.

***First Marriage:*** Ratio of the number of first marriages observed in a population in a given period to the number of persons in that population regardless of the marital status (per 1,000).

**Mortality:** Ratio of the annual number of deaths occurring in a population or sub-population during a given period to the number exposed to the risk of dying during the same period (per 1,000).

**Population Growth:** Ratio of population growth between the year  $t$  and  $t+1$ , to the average population of that period (per 1,000).

**Residual:** Difference between population growth as measured by population estimates of two consecutive years and the sum of the components. This difference results from the distribution of the closure error between years within the quinquennial period.

**Returning Canadians:** Canadian citizens and landed immigrants who emigrated from the country and who subsequently returned to Canada to re-establish a permanent residence.

**Sex Ratio:** The ratio of the number of men to the number of women. This is not to be confused with the sex ratio at birth, which is the ratio of the number of liveborn boys to the number of liveborn girls. This ratio is usually expressed as an index, with the number of females taken to be a base of 100.

**Standardized Rates:** Mathematical transformations designed to make it possible to compare different populations with respect to a variable, e.g., fertility or mortality, where the influence of another variable, e.g., age, is held constant.

**Structure:** Arrangement of a population by different demographic characteristics such as age, sex or marital status.

**Tempo:** Distribution over time, within the cohort, of the demographic events corresponding to the investigated phenomenon.

**Total Rates:** A period measure obtained by the summation of the series of age-specific or duration-specific rates. It represents the behaviour of the members of the fictitious cohort.

**Total Divorce Rate:** Proportion of marriages that finish in divorce before the 25th anniversary according to the divorce conditions of that year. It is a result of the sum of the divorce rates by length of marriage expressed per 10,000.

**Total Fertility:** Average number of children per female aged 15 to 49, according to the fertility in a given year computed by the summation of the series of age-specific fertility rates, expressed per 1,000 women.

**Total First Marriage:** Proportion of males or females marrying before their 50th birthday according to nuptiality conditions in a given year computed by the summation of the rates by age at first marriage.

**Vital Statistics:** Includes all the demographic events (that is to say births, deaths, marriages and divorces) for which there exists a legal requirement to inform the Provincial or Territorial Registrar's Office.



## **PART II**

### **THE FERTILITY OF IMMIGRANT WOMEN AND THEIR CANADIAN-BORN DAUGHTERS**

by Alain Bélanger and Stéphane Gilbert

### **HEALTHY AGING: THE DETERMINANTS OF AGING WITHOUT LOSS OF INDEPENDENCE AMONG OLDER CANADIANS**

by Laurent Martel, Alain Bélanger and Jean-Marie Berthelot



# THE FERTILITY OF IMMIGRANT WOMEN AND THEIR CANADIAN-BORN DAUGHTERS

Alain Bélanger\* and Stéphane Gilbert\*

## *Summary*

*The fertility of immigrant women differs from that of Canadian-born women. During the baby boom, a phenomenon that affected Canada more than the European countries, fertility rates of immigrant women were lower than those of Canadian women. Today, the fertility of immigrant women, most of whom come from Asia, is higher. But what about the fertility of their daughters? This article will attempt to answer this question.*

*Drawing on the Canadian censuses from 1981 to 2001, the first part of this study compares the fertility of various cohorts of immigrant women between 1981 and 2001. Next, the fertility of immigrants' daughters is estimated and compared to that of first-generation women and women of Canadian origin. Finally, a number of indirect determinants of fertility are analysed for the three generational groups.*

## **Introduction**

Historically, immigration has played an important role in the settlement of Canada. Except for a few quite limited periods, such as the years following the Crash of 1929 or the war years, Canada has always welcomed immigrants in large numbers.

While immigration has almost always accounted for a sizable proportion of Canada's population growth, its proportional importance has recently tended to increase. Since the mid-1990s, migratory increase has been responsible for more than half the total growth. The low fertility of Canadian women and the inevitable aging of the population are causing the rate of natural increase to decline. Between 1981 and 2001, it went from 8.1 per 1,000 to 3.3 per 1,000, a decrease of nearly 60%. Another twenty years and, according to the medium scenario in the most recent projections, the number of deaths should exceed the number of births (Statistics Canada, 2001).

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\* Statistique Canada, Division de la démographie.



Partly in response to this decline in natural increase, the Canadian government has, since the late 1980s, been favourable to an increase in the number of immigrants admitted to Canada. In 2001, Canada received more than 250,000 immigrants, and nearly 70% of Canada's population growth resulted from positive net migration. The resulting immigration rate of 8.1 per 1,000 is approaching the government's long-term objective of 1% (Citizenship and Immigration Canada, 2001).

The contribution of immigration to the growth of the Canadian population is not limited to its direct effects on the population count for the year. The newcomers are often young, and once they have settled in Canada, many of them start a family and have Canadian-born children.

The fertility of foreign-born Canadian women was formerly lower than that of women born in Canada (Kalbach, 1970, Henripin, 1972, Balakrishnan et al., 1979) but is estimated to have overtaken it since the early 1980s (Ng and Nault, 1987, Ram and George, 1990, Dumas and Bélanger, 1994). This is because the changes in Canadian immigration are not only quantitative. Whereas before, almost all immigrants came from Europe, most now come from Asia. In the past, immigrants tended to come from countries where until the baby bust, fertility was lower than in Canada. Today's immigrants tend to come from countries with higher fertility, and they seem to retain, at least for a time, some of the fertility behaviour of their country of origin. But for how long? And what about the fertility of the daughters of immigrants? Is it more similar to that of women of Canadian origin (i.e. women born in Canada of Canadian-born parents, see box), or to that of their immigrant mother?

Fertility analysis is an important component of studies that look at the integration of newcomers into their host society (Massey, 1981). From a purely demographic standpoint, a better knowledge of different groups' fertility behaviour can also be used to develop scenarios for the future course of fertility in laying the groundwork for population projections. The higher fertility of recently arrived immigrant women is one of the few factors that could support a possible rise in Canadian fertility in the short run (Bélanger, 2000).

The objective of this article is to take stock of how the fertility of immigrant women evolved between 1976-1981 and 1996-2001. Using measures of the phenomenon by country of birth and period of immigration, we will observe whether or not the fertility behaviour of immigrant women is tending to converge with that of Canadian-born women and if so, how rapidly this is occurring for different immigrant groups. Second, drawing on the question on parents' place of birth asked in the 2001 Census for the first time since 1971, we estimate the fertility of second-generation Canadian women and compare it with that of first-generation immigrant women and women of Canadian origin (third generation and more).

This essentially comparative analysis fits into different theoretical frameworks proposed in the sociological literature relevant to the integration of new immigrants: the theory of assimilation (which originated in the 1920s and would today instead be described as the theory of immigrant integration), the segmented integration perspective, and the success-oriented immigrant model, developed more recently (Boyd and Grieco, 1998).

According to the theory of integration, it is expected that the longer immigrants reside in the host country, the more they will resemble its population. Like the other theories, the theory of integration has most often been used to describe and explain divergences in the level of social mobility of the different waves of immigrants and their descendants. When transposed to the study of differential fertility, it could translate into the following series of statements:

- 1) the fertility behaviour of women born abroad should fall somewhere between that of the women of their region of origin and that which prevails in Canada;
- 2) the longer immigrant women live in Canada, the more their fertility should approach that of native-born Canadian women;
- 3) the fertility of the children of immigrant women (second generation) should lie between that of Canadian women whose parents were born in Canada (third generation) and that of immigrant women (first generation).

According to the segmented integration perspective, again as it might be applied to differential fertility, the fertility of immigrant women and their female descendants should, according to the theory, generally converge toward that of third-generation Canadian women, but it should do so at different speeds for different groups, and for some groups it may actually tend to diverge.

Lastly, according to the success-oriented approach, the children of immigrants, pushed by the success orientation of their immigrant family, are more motivated than others to invest in their human capital and to have higher aspirations with respect to their participation in the labour market than others. In particular, this would be reflected by a stronger tendency to pursue education for a prolonged period. The prolongation of education and the participation of women in the labour market are among the variables usually put forward to explain the drop in fertility in Canada as elsewhere in the world. At the individual level, the prolongation of education almost always entails postponing the first child, and this often means having fewer children than the number initially desired. Thus, the fertility of children of immigrants may not lie between that of their parents, who are first-generation Canadians, and that of persons of Canadian origin, as postulated by the theory of integration. Instead, it may be lower than that of the latter group.



### ***Definitions: First, Second and Third Generations***

*In this article, the concept of a generation refers to the time interval that separates successive degrees of filiation — the generation of grandparents, parents and children — defined here in relation to the arrival of the first ancestor on Canadian soil. Generational status refers to that of the mother and is defined using the census questions on the place of birth of respondents and their parents.*

*The first generation of Canadian women is therefore made up of women born abroad, whereas the second generation consists of Canadian-born women with at least one parent who was born abroad. The final category, women of Canadian origin or women of the third generation, includes all other women whose parents are native-born Canadians.*

*Some studies also identify two other groups. Immigrants entering Canada in childhood have been exposed to the values of the host country for a longer time and earlier in their life, and therefore their integration into Canadian society may be different from that of immigrants who came to Canada as adults. Among other things, they have attended Canadian schools and thus received part of their education in one of the two official languages. They are often referred to as being members of generation 1.5, which implies that they are between immigrants (generation 1) and the children of immigrants*

### **Measuring the Fertility of Immigrant Women and their Daughters**

The mother's place of birth is one of the variables available in vital statistics, but unfortunately the number of records showing a missing value for this variable is sizable, and it varies from year to year. Some provinces have not always reported the parents' place of birth on birth records, with the result that before 1990, the database often has more than 40% missing values. Since 1996, an effort has been made to improve the collection of this information, and the percentage of missing values remains under 2%.

It is difficult to make hypotheses concerning the distribution of these missing data. It may be assumed that the probability that the country of birth will be reported is higher for mothers who are born in Canada, but it is impossible to determine that probability or estimate what proportion of incomplete records are for mothers born in Canada and what proportion are for mothers born abroad. In any case, vital statistics do not register the grandparents' place



(generation 2). This study does not make such a distinction, but it will sometimes be useful to refer to this concept, especially when analysing the fertility of women born abroad by age and period of immigration.

The other distinction made by some analysts is based on the premise that persons with one parent of Canadian origin and the other of foreign origin live from birth in an environment in which various influences are mixed together. Because of their “mixed” family socialization, they are considered to be different from both the persons who make up the second generation and those who make up the third generation. In the literature, these persons are usually referred to as members of generation 2.5.

Second and third generation Canadians can be identified only for the 2001 Census, since the question on parents’ place of birth had not been asked since the 1971 Census. For the censal periods 1976-1981 to 1991-1996, the analysis of differential fertility according to the mother’s place of birth therefore contrasts the fertility of first-generation women — those who immigrated to Canada — with that of Canadian-born women without distinguishing between the second and third generations.

of birth, which would be needed in order to determine second-generation status. Therefore, such data do not lend themselves to an in-depth analysis of differential fertility according to the mother’s place of birth, let alone to a comparative analysis based on generational status.

However, there is an indirect method of estimating fertility based on census data alone. Known as the “own children method,” it draws on the fact that the vast majority of young children are living with their mother at the time of the census. Since the date of birth of both mother and children is known, it is easy to calculate age-specific fertility rates and thus obtain an estimate of the total fertility rate. An approximate correction can be made to take account of infant mortality and the proportion of children not living with their mother at the time of the census.

Originally developed to estimate fertility in countries in which birth records are not kept systematically, this method can also be used to analyse differential

**Table 1. Comparison of Fertility Rates by Age Group and the Total Fertility Rate, Estimated According to the Own Children Method (Census) and Vital Statistics, Women Born in Canada and Abroad, Canada, 1996-2001**

Age Group	Women Born Abroad				Women Born in Canada	Total
	Europe	Asia	Others	Total		
15-19 20-24 25-29 30-34 35-39 40-44 45-49 TFR  15-19 20-24 25-29 30-34 35-39 40-44 45-49 TFR	Vital Statistics Estimates					
	0.049	0.044	0.154	0.070	0.097	0.095
	0.251	0.357	0.537	0.364	0.299	0.308
	0.484	0.646	0.754	0.603	0.481	0.503
	0.454	0.569	0.693	0.537	0.396	0.425
	0.182	0.279	0.341	0.248	0.145	0.166
	0.029	0.056	0.079	0.048	0.022	0.027
	0.001	0.003	0.004	0.002	0.001	0.001
	1.45	1.95	2.56	1.87	1.44	1.52
	Census Estimates					
	0.005	0.006	0.022	0.010	0.015	0.014
	0.124	0.155	0.285	0.174	0.172	0.172
	0.402	0.502	0.630	0.492	0.408	0.420
	0.546	0.639	0.732	0.607	0.515	0.533
	0.323	0.420	0.509	0.390	0.279	0.301
	0.089	0.144	0.186	0.128	0.073	0.084
	0.012	0.023	0.031	0.019	0.009	0.011
	1.50	1.89	2.40	1.82	1.47	1.54

**Sources:** Statistics Canada, 2001 Census of Canada and Health Statistics Division.

fertility according to various characteristics that the census may collect. These characteristics should remain stable throughout women’s childbearing years; otherwise births may be improperly assigned. For example, a woman who is divorced at the time of the census may very well be living with young children from a recently dissolved marriage. These births could be attributed to divorced women, whereas when the children were born, their parents were still married.

Also, even without the problem of missing data, the traditional estimation method, based on vital statistics, has a number of limitations when applied to estimating differential fertility according to the mother’s place of birth. Since the numerator and the denominator of the rates come from two different sources, it is more difficult to ensure consistency between the two. First, the census and vital statistics may report the country of birth differently; but more importantly, it is highly unlikely that the census data and birth statistics will be equally complete. For example, assuming that vital statistics are complete and exhaustive for all groups based on country of birth, if the net undercoverage in the census is greater or lesser for one group than for another, the estimate of its fertility will be high or low (Desplanques, 1993). The own children method is not subject to these potential biases, since the numerator and the denominator of the rates are obtained from the same data source.



Table 1 compares estimates of fertility rates by age group and the total fertility rate obtained using the own children method (census) and vital statistics. The total rate obtained using the own children method (1.54 children per woman) is slightly higher than the estimate obtained using the traditional method based on vital statistics (1.52 children per woman). The difference between the two estimates represents approximately 1% of the total period rate. For women born in Canada, the estimate obtained using the own children method is 2% higher than that obtained using vital statistics, whereas conversely, the estimate for women born abroad is nearly 3% lower.

Table 1 also shows that while the differences between the two estimation methods are not very sizable with respect to the total fertility rate, the gaps are greater for some age groups. The relative gap between the two estimates is minimal between ages 25 and 34, but it increases in one direction or the other at either end of the fertility period. Among younger women, the estimate based on vital statistics indicates higher fertility rates than the estimate based on the census alone. Beyond age 30, on the other hand, the estimate based on the census is higher. This is because of a well-documented bias in the own children method (Cho et al., 1986; Desplanques, 1993), which probably results from a greater propensity among children with young mothers to live in another family (or in a non-family setting). It is also possible that some children living in households whose composition is complex will be attributed to a woman other than their mother, since it is not always easy to establish links between all the members of a household on the basis of the only question that relates each member to the reference person. Also, since the own children method relates children under five years of age to women according to their age in the census, the women were, on average, two and a half years younger when the child was born. This lag explains most of the differences observed between the two sources. However, this bias in age-specific rates generally does not result in any major divergence for the total fertility rate.

## Results

In the 2001 Census, nearly five and a half million persons born outside Canada were enumerated, representing 18% of the total population. This proportion is one of the highest in the world. For many people, American immigration has an almost mythical quality, yet the proportion of persons in the United States who were born abroad (11%) is barely half that in Canada, a fact that underlines how important a role immigration plays in Canadian population growth.

The proportion of children under five years of age born in Canada whose mother was born abroad is even larger than the proportion of the population that has immigrated, which gives us a first indication of the greater fertility of those mothers. Table 2 shows the number of children under five years of



**Table 2. Change in the Number of Children Under Five Years of Age Born in Canada by Mother's Place of Birth<sup>1</sup>, Canada, 1981-2001**

Year	Women Born Abroad				Women Born in Canada	Total
	Europe	Asia	Others	Total		
1981	159,900	65,500	72,605	298,005	1,388,845	1,686,850
1986	121,410	75,050	79,950	276,410	1,437,660	1,714,070
1991	99,835	94,970	86,695	281,500	1,476,360	1,757,860
1996	93,005	140,800	108,240	342,045	1,442,785	1,784,830
2001	74,660	160,565	102,465	337,690	1,221,435	1,559,125

<sup>1</sup> Children living with their mother.

**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.

age according to the mother's place of birth in the censuses conducted at five-year intervals from 1981 to 2001. Already in 1981, the approximately 300,000 children whose mother had immigrated to Canada accounted for 18% of all enumerated children under five. By the time of the 2001 Census, this proportion had risen to more than 22%.

Major changes may also be observed in the composition of the group of children with an immigrant mother. In 1981, children with a mother born in Europe accounted for 54% of all children with a foreign-born mother, whereas those whose mother was born in Asia accounted for only 22% of the whole (Figure 1). In the 2001 Census, children whose mother was born in Europe accounted for only 22% of all children whose mother was born abroad, whereas those whose mother was of Asian origin accounted for nearly half (48%).

This change over time clearly results from the sizable increase in the number of women of childbearing age who were born in Asia and the declining number of European-born women, and perhaps the higher fertility of the former group.

### **Fertility of Immigrant and Native-born Canadian Women**

Table 3 shows the change in the total fertility rate of native-born Canadian women and immigrant women between 1976-1981 and 1996-2001. During this quarter century, the fertility of immigrant women was consistently higher than that of Canadian-born women, exceeding it by 20% to 25% depending on the period.

Both for women born abroad and Canadian-born women, the fertility trend was downward during the study period. The downward change is fairly similar for the two groups. At most, it may be noted that during the 1980s, when immigration was lower, the fertility differences between the two populations

**Figure 1. Change in the Proportion of Children Under Five Years of Age with an Immigrant Mother by Mother's Place of Birth<sup>1</sup>, Canada, 1981-2001**



<sup>1</sup> Children living with their mother.

**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.

narrowed slightly. This is perhaps because the proportion of newly arrived immigrant women was smaller and these women, as we will see, have a higher fertility level than immigrant women who have lived in Canada longer.

Over the study period as a whole, the rate for Canadian-born women went from 1.64 children per woman for the period 1976-1981 to 1.47 children per woman for the period 1996-2001, representing a decrease of 10%. During the same period, the rate for women born abroad also fell by 10%, going from 2.03 children per woman to 1.82 children per woman.

But the immigrant population is a heterogeneous group whose composition changed substantially over the study period. During the last decade of the twentieth century, nearly three immigrants in five (59%) were from Asia, with most of them coming from East Asia (China, Hong Kong, Taiwan), South Asia (India, Pakistan and Sri Lanka) and, to a lesser extent, Southeast Asia (the Philippines). This preponderance of Asian countries as a source is relatively recent in the history of Canadian immigration. In the mid-1960s, the vast majority of immigrant women were still coming from Europe. Indeed, at that time, two European countries dominated Canadian immigration to a much

**Table 3. Total Fertility Rate of Canadian-born Women and Canadian Women Born Abroad by Region of Birth, Canada, 1976-1981 to 1996-2001**

Birth Region	1976-1981	1981-1986	1986-1991	1991-1996	1996-2001
<b>Total Canada</b>	<b>1.70</b>	<b>1.61</b>	<b>1.61</b>	<b>1.66</b>	<b>1.54</b>
Born in Canada	1.64	1.56	1.56	1.60	1.47
Born Outside Canada	2.03	1.87	1.88	1.99	1.82
<b>Total Europe</b>	<b>1.90</b>	<b>1.68</b>	<b>1.66</b>	<b>1.66</b>	<b>1.50</b>
United Kingdom	1.66	1.64	1.64	1.58	1.46
Northern & Western Europe	1.76	1.74	1.68	1.76	1.67
Eastern Europe	1.68	1.63	1.68	1.75	1.34
Southern Europe	2.17	1.71	1.72	1.68	1.62
<b>Total Asia</b>	<b>2.54</b>	<b>2.15</b>	<b>2.07</b>	<b>2.13</b>	<b>1.89</b>
Middle East and Middle West Asia	2.74	2.46	2.36	2.56	2.17
Eastern Asia	2.09	1.85	1.66	1.51	1.32
Southeast Asia	2.48	2.03	1.98	1.99	1.76
Southern Asia	3.04	2.50	2.51	2.88	2.51
<b>Rest of the World</b>	<b>2.06</b>	<b>2.02</b>	<b>2.04</b>	<b>2.18</b>	<b>2.02</b>
United States	2.05	2.11	2.07	2.15	1.99
Central and South America	2.27	2.13	2.24	2.25	1.99
Caribbean and Bermuda	1.96	1.86	1.86	2.02	1.73
Africa	1.95	1.94	1.91	2.39	2.38
Oceania and Others	2.19	2.11	2.21	2.02	1.97

**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.

greater extent than China, Hong Kong and India do today. Between 1964 and 1968, for example, one immigrant in four came from the United Kingdom (25%) and one in six from Italy (16%).

The composition of the population of women of childbearing age born abroad has changed considerably (Table 4). In the 1981 Census, 62% of foreign-born women aged 15 to 54 were from Europe, with the remaining 38% divided nearly equally between Asia and the rest of the world (Figure 2). By the time of the 2001 Census, the proportion of foreign-born women of childbearing age who were from Europe was only 33%, and for the first time, the proportion who were from Asia (45%) exceeded the proportion from Europe.

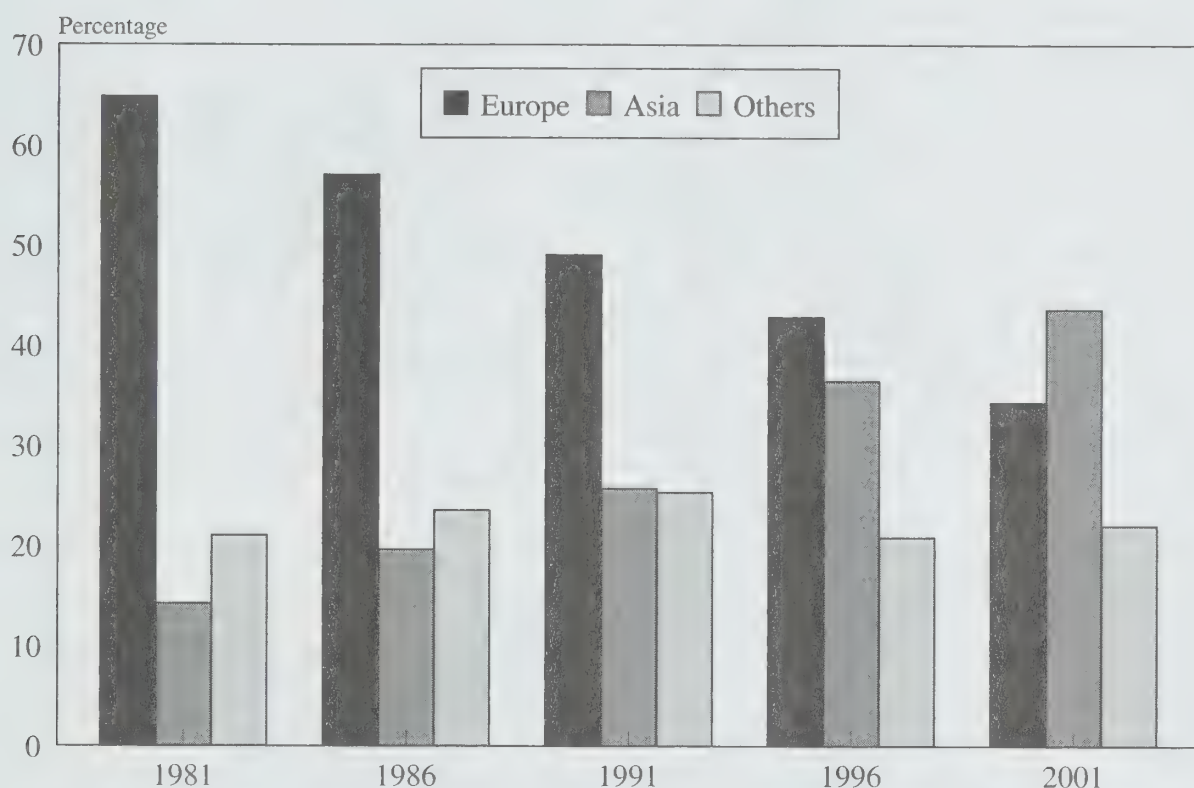
**Table 4. Change in the Number of Women Aged 15 to 54 by Place of Birth, Canada, 1981-2001**

Year	Women Born Abroad				Women Born in Canada	Total
	Europe	Asia	Others	Total		
1981	744,880	195,165	257,110	1,197,155	5,895,740	7,092,895
1986	679,170	257,260	292,190	1,228,620	6,167,685	7,396,305
1991	631,515	391,225	345,225	1,367,965	6,513,045	7,881,010
1996	593,715	584,405	306,423	1,484,543	6,809,330	8,293,873
2001	540,385	745,355	356,218	1,641,958	6,971,110	8,613,068

**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.



**Figure 2. Change in the Proportion of Foreign-born Women Aged 15 to 54 by Place of Birth, Canada, 1981-2001**



**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.

The different groups formed by grouping countries of birth exhibit major differences with respect to their fertility level. The fertility of European women is quite different from that of Asian women, both when they are in their country of origin and once they are settled in Canada. Furthermore, even within the major groups of countries consisting of Europe, Asia and the rest of the world, there are sizable variations in fertility. It is therefore useful to analyse the evolution of fertility within the different groups of countries of origin (see map on next page).

While fertility has evolved along similar lines among native-born Canadian women and immigrant women, this overlooks contrasts between the different groups defined by country of birth (Table 3). For example, throughout the study period, women born in Europe — especially those born in the United Kingdom — exhibit a fertility level similar to that of native-born Canadian women, although it is slightly lower. By contrast, women from South Asia have a much higher fertility level, which drops off less rapidly than that of other groups. And the total rate for women from Africa actually increased substantially (25%) during the 1990s.

# Grouping of Countries of Birth of Immigrants Received in Canada





According to the estimates shown in Table 3, only women in three groups of countries of birth — East Asia, the United Kingdom and Eastern Europe — exhibit a lower fertility level than native-born Canadian women during the period 1996-2001. Two of these three groups of countries are European.

Women from Southern Europe are among those who saw their fertility decline the most rapidly during the quarter century studied, with their total fertility rate going from 2.17 children per woman to 1.62 children per woman, a 25% drop. It is interesting to note that Spain, Italy and Greece are today among the countries with the lowest period fertility rates in the world, whereas 25 years ago, the fertility of countries in Southern Europe was higher than that of the rest of the continent. It appears that the fertility of the women who came from these countries and settled in Canada has evolved along similar lines as that of the women who remained in their country of origin.

While it has fallen substantially, the fertility of Asian women is still, according to the 2001 Census, much higher than that of native-born Canadian women. During the first censal period, the fertility of Asian-born women was much higher than that of Canadian- or European-born women. The total fertility rate for these women went from 2.54 children per woman for the period 1976-1981 to 1.89 children per woman for the most recent period, 1996-2001. While the fertility of these women remains considerably higher than that of Canadian-born women (29% higher), it has nevertheless fallen more rapidly, and therefore some convergence is observed.

The fertility of women from East Asia in particular fell the most dramatically during the period. Whereas the rate for women from this region exceeded 2 children per woman in 1976-1981, in the most recent censal period it was the lowest for any group of countries of birth, at 1.32 children per woman.

While the fertility of women from East Asia has fallen sharply, this is not the case with women from other regions of Asia. The fertility of women from South Asia in particular has remained at high levels compared with that of all other groups. With a total rate of 2.5 children per woman during the period 1996-2001, these women have reached a fertility level comparable to that last posted by Canadian women in 1967, at the end of the baby boom. Women from the Middle East and Western Asia have also tended to maintain a relatively high fertility level after coming to Canada (2.2 children per woman in 1996-2001). The increased proportion of immigrant women who originate from these regions, combined with the maintenance of a relatively high level of fertility, means that the proportion of children born to women from these two regions has increased substantially. *In 1981, children born in Canada to women from South Asia and the Middle East represented less than 10% of all children whose mother was born abroad, whereas in 2001 they represented one-quarter.*



During the period 1996-2001, the fertility of women from Europe was only 2% higher than that of Canadian-born women, while the fertility of Asian women was 29% higher. On the other hand, women from the rest of the world (Africa, Latin America and the Caribbean) maintained a high and nearly stable fertility approaching the replacement level throughout the study period. For the period 1996-2001, their fertility exceeded that of Canadian-born women by 37%. Table 3 also shows that during the study period, the total fertility rate fell for almost all groups of countries of birth. Only the rate for women from Africa rose.

### **Changes by Immigration Period**

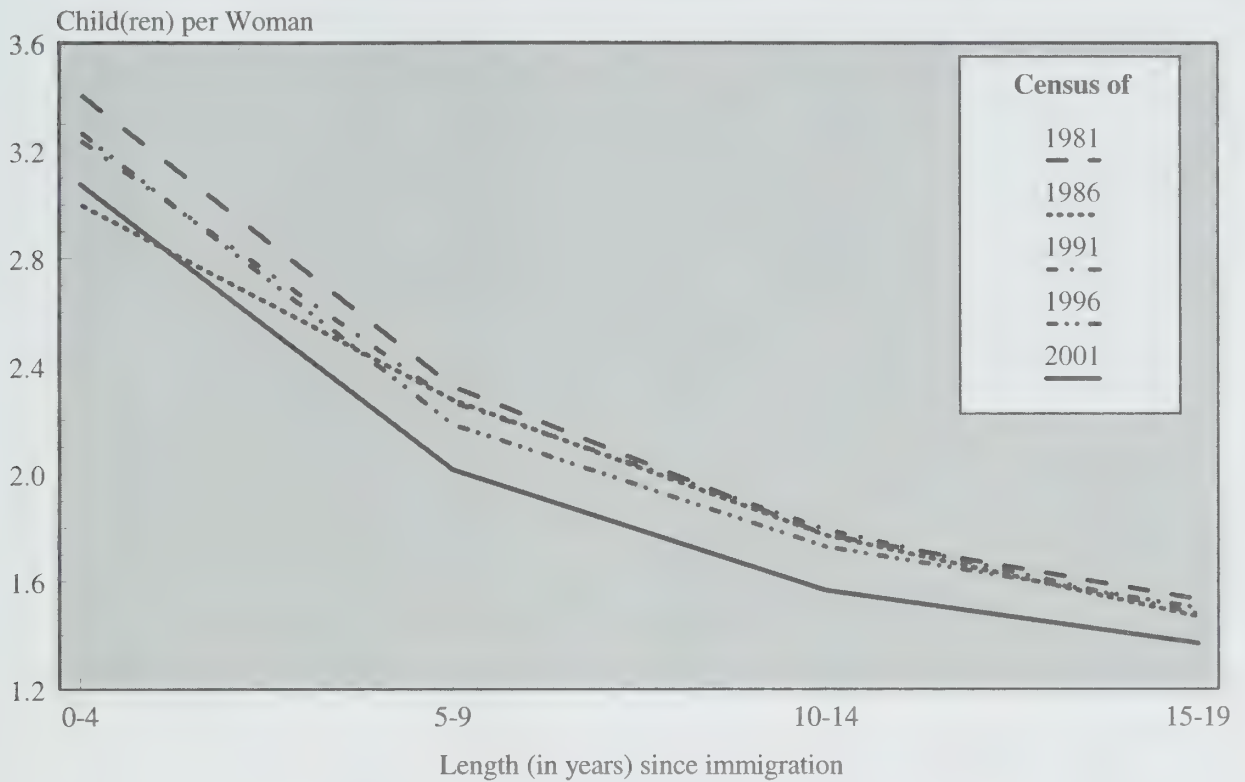
Various studies have found that the fertility of immigrant women varied according to length of residence in the host country (Goldstein and Goldstein, 1981; Hervitz, 1985). According to these studies, the fertility of the newcomers declined in the years following their arrival. This decrease, they find, results from the disruption caused by migration, with immigrant couples limiting their fertility during the period surrounding their emigration. Subsequently, their fertility rises, but the increase is only temporary. After this rebound, the fertility of immigrant women declines the longer they live in the host country. This pattern has been observed in Canada by Ram and George (1990) and Beaujot (1991).

Some authors (Ng and Nault, 1997) find that this pattern results primarily from a decrease in fertility prior to emigration, when the future immigrants are still in their country of origin, rather than from a decrease in their fertility once they arrive in the host country. They come to this conclusion focusing solely on children under one year of age rather than children aged 0 to 4, arguing that many of the older children of women who had immigrated in the five years preceding the census could have been born abroad, since on average, these women would have spent half of those five years in their country of origin. However, in the latter study, the authors did not look at the child's place of birth (i.e., in Canada or outside Canada).

Figure 3 presents an estimate of the total fertility rate of women born abroad according to the length of time since their immigration to Canada. These estimates, obtained using the own children method (for children aged 0 to 4) cover only children born in Canada. The denominators of the rates are also corrected to take account of the years lived abroad by women who immigrated during the period preceding each census. These are therefore estimates of the fertility of immigrant women once they have settled in Canada.

For each of the five censuses considered, the pattern supporting the hypothesis of a disruption of fertility is not apparent. The fertility of immigrant women is very high during the period immediately following their arrival in Canada. It falls substantially during the following period, after which it declines

**Figure 3. Total Fertility Rate of Women Born Abroad by Period of Immigration, Canada, 1981-2001**



**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.

more slowly. According to the estimate obtained by applying the method to data from the 2001 Census, for example, the fertility of immigrant women once they have arrived in Canada is 3.1 children per woman for those who arrived in the previous five-year period. It declines to 2.0 children per woman for those whose length of residence in Canada is 5 to 9 years. Subsequently it reaches just over 1.5 children per woman for those admitted 10 to 14 years earlier and 1.4 children per woman for those who received their immigrant status 15 to 19 years before the census (Figure 3).

As suggested by Ng and Nault (1997), the disruptive effect that immigration can have on fertility does indeed appear to result in a decrease in the fertility of women who are future immigrants while they are still in their country of origin. The census collects the child's place of birth and allows us to compute the number of person-years lived in Canada or abroad by women included in the most recent immigrant cohort, and therefore it enables us to estimate the fertility of these women according to whether the birth occurred before or after immigration. The results of such a calculation are shown in Table 5. Clearly, the newcomers' fertility is much greater after their arrival in Canada

**Table 5. Total Fertility Rate of Immigrant Women Admitted During the Five Years Preceding the Census According to Whether the Child was Born in Canada or Abroad, Canada, 1981 to 2001**

Census / Place of Birth	Place of Birth of Child			
	Born Abroad (1)	Born in Canada (2)	Total (3)	Ratio (2) / (1)
1981				
Europe	0.97	4.05	2.20	4.2
Asia	0.85	4.22	2.28	5.0
Other	0.70	3.20	2.08	4.6
Total	0.84	3.78	2.19	4.5
1986				
Europe	0.75	3.23	1.86	4.3
Asia	0.65	3.14	2.00	4.8
Other	0.77	3.39	2.20	4.4
Total	0.71	3.22	2.01	4.5
1991				
Europe	0.91	3.88	1.70	4.3
Asia	0.69	3.63	1.72	5.3
Other	0.82	3.79	2.16	4.6
Total	0.76	3.71	1.83	4.9
1996				
Europe	0.85	3.63	1.72	4.3
Asia	0.50	3.62	1.86	7.2
Other	0.59	4.24	2.30	7.2
Total	0.57	3.75	1.93	6.6
2001				
Europe	0.99	3.09	1.54	3.1
Asia	0.76	4.15	1.85	5.5
Other	0.72	5.96	2.36	8.3
Total	0.77	4.24	1.89	5.5

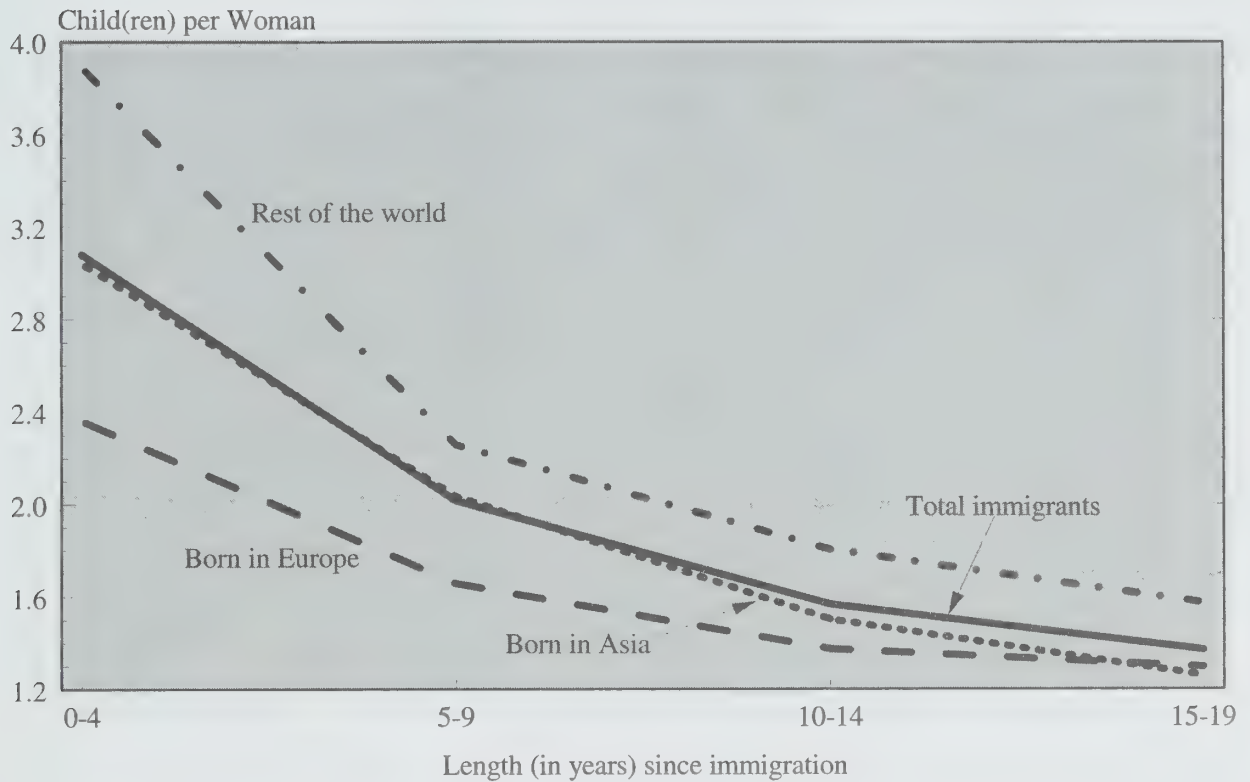
**Sources:** Statistics Canada, censuses of Canada, 1981 to 2001.

than prior to it: it is at least three times higher, but generally four to five times higher. It is possible that some children were born in Canada while their parents had not yet received their landed immigrant status, inflating those ratios, but probably not enough to change this conclusion. This disruptive effect of immigration on fertility appears to be greater among non-European women than among Europeans; the ratio between the rate calculated for the period following immigration and that for the period prior to immigration is higher for the former group in all censuses.

With some exceptions — and here we are thinking in particular of the case of refugees who must sometimes flee their country of origin precipitously — the decision to migrate is made long before the event occurs, if only because of the lag between when the person applies to immigrate and when the application is accepted. In such circumstances, it is not surprising that immigrants plan



**Figure 4. Total Fertility Rate of Women Born Abroad Since Immigration and Region of Origin, Canada, 1996-2001**

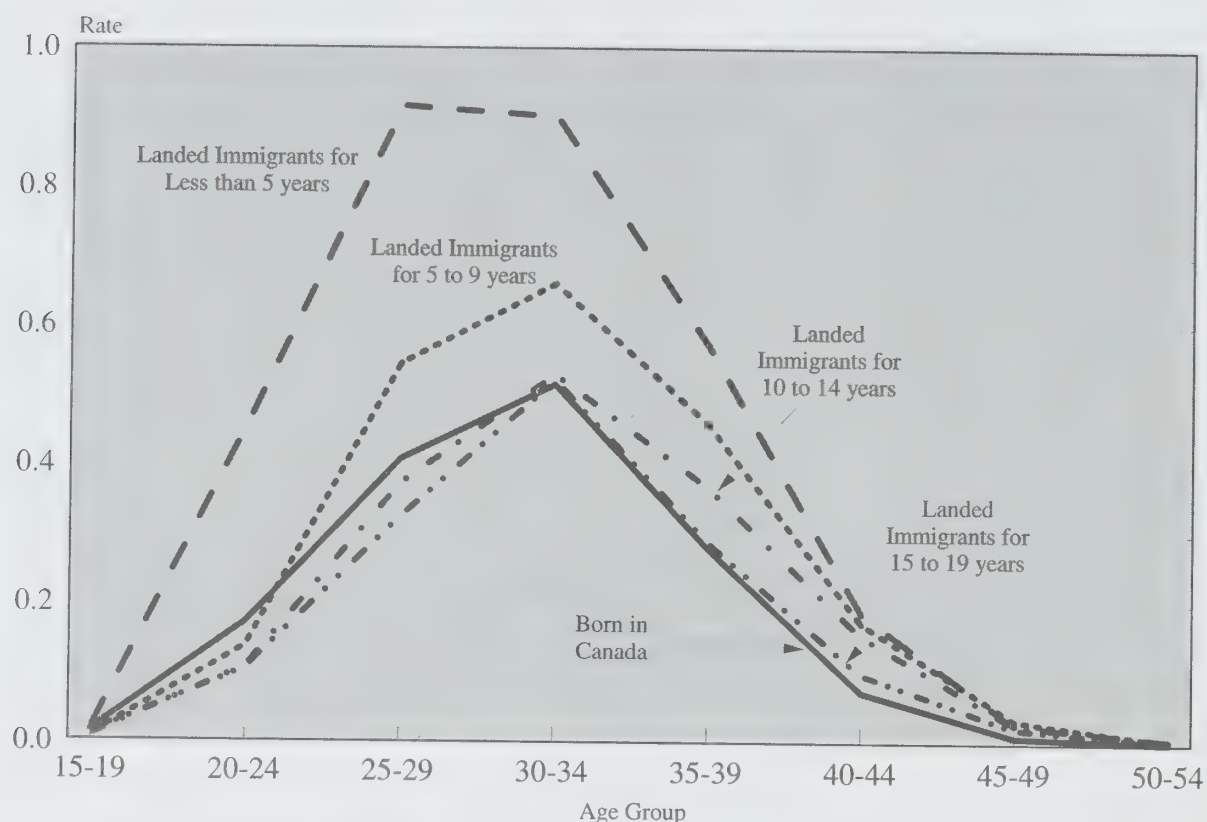


**Source:** Statistics Canada, Census of Canada 2001.

the birth of a child and their immigration concurrently, and they often prefer to postpone the child's arrival. On the other hand, once settled in Canada, they seem to be in a hurry to end the wait. In a sense, this may be an indication of their desire to put down roots in their new country.

As Figure 4 shows, this pattern is observed for immigrant women from all regions of origin, although each group's fertility level differs, as noted above. In fact, it appears that compared to women from Europe, the higher fertility of women from Asia and those born in the rest of the world is primarily due to greater fertility in the years following their arrival in Canada. The fertility gaps between immigrant women from Europe and those from Asia or the rest of the world are greater in the first ten years after the year in which they received their immigrant status. The fertility of Asian women in particular is similar to that of European women ten years after their arrival in Canada. For Asian women, the fertility rate is 1.5 children per woman, while for European women it is roughly 1.4 children per woman. *It appears that economic and social factors in Canada influence the fertility level of Canadian women as well as the fertility of major groups of female immigrants, and that after a relatively short period, these immigrants adopt fertility behaviours similar to those of Canadian women.*

**Figure 5. Age-specific Fertility Rates of Immigrant Women Since Immigration, Canada, 1996-2001**



**Source:** Statistics Canada, Census of Canada 2001.

Figure 5 compares age-specific fertility rates of immigrant women from different periods of immigration with those of native-born women as estimated from the 2001 Census.<sup>1</sup> It shows that the greater fertility of immigrant women admitted 5 to 9 years before the census is primarily due to a relatively high fertility level after age 25, whereas the greater fertility of immigrant women whose length of residence is shorter is more apparent among those who are younger, although it is observable for all ages.

Immigrant women admitted to Canada between 10 and 14 years prior to the census have a fertility level similar to that of native-born Canadian women, but they have a somewhat slower tempo than the latter: their fertility is lower before age 30 and higher thereafter. While the youngest of these women were born abroad, they arrived in Canada at a very young age. For example, those between 20 and 24 years of age who received their immigrant status between 10 and 14 years ago were between 5 and 14 years of age at that time. They therefore attended Canadian schools and were probably socialized differently from those arriving later in their life. As to members of what is

<sup>1</sup> Based on the mother's age in the census.

**Table 6. Age-specific Fertility Rate and Total Fertility Rate by Generation, Canada, 1996-2001**

Age Group	Generations				Total
	Women Born Abroad	Women Born in Canada With Both Parents Born Abroad	Women Born in Canada with One of the Parents Born Abroad	Women Born in Canada with Both Parents Born in Canada	
15-19	0.010	0.014	0.015	0.023	0.026
20-24	0.174	0.078	0.121	0.193	0.168
25-29	0.492	0.242	0.323	0.447	0.407
30-34	0.607	0.538	0.518	0.523	0.523
35-39	0.390	0.376	0.324	0.269	0.300
40-44	0.128	0.116	0.092	0.068	0.085
45-49	0.019	0.017	0.012	0.009	0.012
T.F.R.	1.82	1.38	1.41	1.53	1.52

**Source:** Statistics Canada, Census of Canada 2001.

termed generation 1.5 in the classification system described above, their fertility behaviour is not entirely comparable either to that of other immigrant women or to that of native-born Canadian women. Thus the question that arises is, what about the fertility of the daughters of immigrant women, that is, second-generation Canadian women?

### **The Fertility of Second-generation Canadian Women**

The 2001 Census allows us, for the first time in 30 years, to estimate the fertility of the daughters of immigrant women and therefore answer this question. According to the estimate obtained using the own children method (Table 6), the total fertility rate for second-generation women is 1.4 children per woman and is thus lower than that of first-generation women (1.8 children per woman) and third-generation women (1.5 children per woman).

It is important to note that second-generation Canadian women as identified by answers to the question on parents' place of birth in the 2001 Census are mostly the children of European immigrants. It should therefore be kept clearly in mind that the ethnic origin of the women who are first-generation Canadians is much different from that of second-generation Canadian mothers. For example, some 30% of women aged 15 to 54 in the 2001 Census who immigrated to Canada (first generation) have parents born in Europe, whereas the corresponding proportion of women of the same age group belonging to the second generation is approximately 70%. Also, whereas nearly 60% of women aged 15 to 24 in the first generation report having visible minority status, only 23% of those of the second generation do so (Table 7).



**Table 7. Distribution of the Female Population<sup>1</sup> Aged 15 to 54 in Different Generational Groups by Selected Characteristics, Canada, 2001**

	Generation 1		Generation 2		Generation 2.5		Generation 3		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Visible Minority										
No	646.0	41.2	457.1	76.9	513.1	96.2	4,617.7	99.3	6,233.8	84.9
Yes	921.2	58.8	137.4	23.1	20.1	3.8	30.4	0.7	1,109.0	15.1
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Low-income Threshold										
Above	1,230.3	78.5	541.2	91.0	486.5	91.2	4,145.8	89.2	6,403.8	87.2
Below	336.8	21.5	53.3	9.0	46.7	8.8	502.3	10.8	939.1	12.8
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Education Level										
No Diploma	356.6	22.8	100.8	17.0	116.4	21.8	1,140.8	24.5	1,714.6	23.4
Secondary School Diploma	260.8	16.6	91.4	15.4	90.0	16.9	930.0	20.0	1,372.1	18.7
Postsecondary without a University Diploma	525.4	33.5	251.8	42.4	216.5	40.6	1,803.1	38.8	2,796.9	38.1
Postsecondary with a University Diploma	424.3	27.1	150.5	25.3	110.4	20.7	774.2	16.7	1,459.3	19.9
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Marital Status										
Divorced, Separated, Widowed	129.3	8.3	30.0	5.1	36.8	6.9	317.2	6.8	513.3	7.0
Married, Common-law	1,159.6	74.0	322.3	54.2	332.6	62.4	3,168.3	68.2	4,982.7	67.9
Single	278.3	17.8	242.1	40.7	163.8	30.7	1,162.6	25.0	1,846.9	25.2
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Full-time Student										
No	1,365.4	87.1	451.0	75.9	427.5	80.2	3,907.1	84.1	6,151.0	83.8
Yes	201.8	12.9	143.4	24.1	105.7	19.8	741.0	15.9	1,191.8	16.2
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Age Group										
15-19	105.6	6.7	95.1	16.0	85.1	16.0	606.0	13.0	891.8	12.1
20-24	108.6	6.9	95.2	16.0	63.6	11.9	471.3	10.1	738.7	10.1
25-29	145.7	9.3	82.0	13.8	54.6	10.2	455.4	9.8	737.7	10.0
30-34	211.7	13.5	84.6	14.2	57.2	10.7	527.7	11.4	881.3	12.0
35-39	256.6	16.4	86.4	14.5	64.1	12.0	692.0	14.9	1,099.1	15.0
40-44	253.5	16.2	81.9	13.8	65.9	12.4	730.8	15.7	1,132.1	15.4
45-49	247.0	15.8	46.6	7.8	69.1	13.0	641.1	13.8	1,003.7	13.7
50-54	238.6	15.2	22.6	3.8	73.5	13.8	523.8	11.3	858.5	11.7
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Place of Birth of Father										
Canada	41.9	2.7	0.0	0.0	229.0	42.9	4,648.1	100.0	4,918.9	67.0
Rest of the World	345.9	22.1	73.6	12.4	55.0	10.3	0.0	0.0	474.5	6.5
Asia	691.3	44.1	95.0	16.0	10.5	2.0	0.0	0.0	796.9	10.9
Europe	488.1	31.1	425.8	71.6	238.7	44.8	0.0	0.0	1,152.6	15.7
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0
Place of Birth of Mother										
Canada	43.1	2.8	0.0	0.0	304.2	57.1	4,648.1	100.0	4,995.4	68.0
Rest of the World	345.8	22.1	77.9	13.1	54.0	10.1	0.0	0.0	477.8	6.5
Asia	688.7	43.9	94.4	15.9	7.3	1.4	0.0	0.0	790.3	10.8
Europe	489.5	31.2	422.2	71.0	167.7	31.4	0.0	0.0	1,079.4	14.7
Total	1,567.2	100.0	594.4	100.0	533.2	100.0	4,648.1	100.0	7,342.9	100.0

<sup>1</sup> Non Aboriginal Population of the 10 provinces only.

**Note:** Numbers in thousands.

**Source:** Statistics Canada, Census of Canada 2001.

It therefore seems useful to control for other factors so as to determine whether the fertility differences observed between the different generations actually results from a process of integration of the newcomers or whether these differences are merely due to the different composition of the population of each generational group. One way to answer this question is to use multivariate regression models, which look at the effects of a set of independent variables on a dependent variable. This is what is shown in Table 8, which presents the results, in terms of risk ratios, of a series of nested logistical regressions. The dependent variable is the probability of a woman of childbearing age living with at least one child under the age of 5. Different models were tested each controlling for age, a crucial factor in the study of fertility, and include the generational group, the variable that we are interested in. Successively, variables are added controlling for the effect of marital status, visible minority status, living in a low-income family, education level and full-time student status. These regressions are performed on all child-bearing age women who completed the long form of the 2001 Census (20% sample). Since the sample contains more than 1,400,000 women of childbearing age, the accuracy of the estimates is quite high and all differences are statistically significant.

If the dependent variable used is interpreted as a measure of fertility, when we control only for age, we find that in relation to third-generation women, immigrant women are 9% more likely to have a child and second-generation women are between 7% and 17% less likely, depending on whether both parents or only one were immigrants (generation 2 and 2.5).

As soon as we additionally control for marital status, the differences between these odds ratios are reduced substantially: the children of immigrants are now only 2% to 3% less likely to live with a child under 5 years of age than women of Canadian origin. On the other hand, the odds ratio for immigrant women increases slightly.

Introducing visible minority status greatly reduces the gaps between the odds ratios of the different generational groups. This is more the case with introducing the low-income variable which, when introduced, reduces the differences between the different groups to at most 1% in either direction. Introducing education level and full-time student status changes the outcome very little. Lastly, when we control for age, marital status, income, visible minority status, education level and full-time student status, the fertility differences between the generational groups are almost nil (1%).

## **Conclusion**

Through an analysis of the fertility of immigrant women over the past 25 years, we have been able to measure differences in fertility between Canadian women born in Canada and those born abroad. Our analysis has also shown that the differences are mainly observable among newcomers, i.e., those who

**Table 8. Relative Likelihood of a Woman Aged 15 to 54 Living with at Least One Child Aged 0 to 4 in her Census Family, Canada, 2001**

	Model						
	1	2	3	4	5	6	7
Age Group							
15-19	0.02	0.08	0.08	0.08	0.08	0.14	0.15
20-24	0.24	0.49	0.49	0.48	0.48	0.58	0.59
25-29	0.74	0.88	0.88	0.88	0.88	0.90	0.90
30-34 (reference)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
35-39	0.44	0.41	0.41	0.42	0.42	0.41	0.41
40-44	0.11	0.10	0.10	0.10	0.10	0.10	0.10
45-49	0.01	0.01	0.01	0.01	0.01	0.01	0.01
50-54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marital Status							
Divorced, Separated, Widowed	...	0.57	0.57	0.46	0.46	0.47	0.47
Married, Common-law (reference)	...	1.00	1.00	1.00	1.00	1.00	1.00
Single	...	0.20	0.20	0.18	0.18	0.21	0.21
Visible Minority							
No (reference)	...	...	1.00	...	1.00	1.00	1.00
Yes	...	...	1.13	...	1.05	1.08	1.07
Living in a Low-income Family							
No (reference)	...	...	...	1.00	1.00	1.00	1.00
Yes	...	...	...	1.98	1.98	2.02	2.07
Full-time Studies							
No (reference)	...	...	...	...	...	1.00	1.00
Yes	...	...	...	...	...	0.33	0.32
Educational Level							
No Diploma	...	...	...	...	...	...	0.93
Secondary School Diploma	...	...	...	...	...	...	0.83
Postsecondary without a University Diploma	...	...	...	...	...	...	1.00
Postsecondary with a University Diploma	...	...	...	...	...	...	1.05
Generation							
Generation 1	1.09	1.11	1.03	1.01	0.98	1.00	0.99
Generation 2	0.83	0.98	0.96	1.01	1.00	1.01	0.99
Generation 2.5	0.93	0.97	0.97	0.99	0.99	1.00	0.99
Generation 3 (reference)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Constant	0.81	0.95	0.95	0.89	0.89	0.91	0.93

**Source:** Statistics Canada, Census of Canada 2001.

have resided in Canada for less than 10 years. The fertility of foreign-born women tends to start declining relatively soon after their arrival. The longer the time elapsed since they immigrated, the more fertility declines, tending to reach the level observed for Canadian-born women. This is true for the entire study period and for all major groups of countries of origin.

Thus, measurement of the fertility behaviours of newly immigrated women by means of demographic methods tends to support the hypothesis of the



integration of these women into Canadian society insofar as fertility is an indicator of integration, since their fertility tends increasingly to resemble that of Canadian-born women the longer they reside in Canada. This tendency for the fertility of newcomers to converge with that of native-born Canadian women is especially notable where immigration has occurred at a younger age. In particular, women born abroad who immigrated to Canada before the age of 15 and who therefore received part of their education in Canada tend, once they reach childbearing age, to exhibit fertility rates very similar to those of native-born Canadian women. The fertility behaviours of newly arrived immigrant women appear to tend to converge with that of native-born Canadian women. A similar convergence has also been noted in Australia (Abbasi-Shavazi and McDonald, 2000), another country that encourages newcomers to maintain their cultural differences.

On the other hand, this integration would seem not to be as rapid for all immigrant women, with some groups even maintaining high fertility in all censuses. This supports the idea of a segmented process. While the fertility of immigrant women is higher than that of native-born Canadian women, this is mainly because of the greater fertility of women originating from a few groups of countries of birth. The fertility of women from South Asia, Central-Western Asia and the Middle East, along with the fertility of women from Africa in the last two censuses, largely exceeds the level of two children per women. The fertility of women born in Central or South America or the United States also approaches or exceeds this level, while the total fertility rate for women born in the various regions of Europe or East Asia is much lower.

Lastly, multivariate statistical analysis tends also to support the hypothesis of segmented integration. When we control for age only, as is done with the total fertility rate, we observe major differences between the generational groups in the probability that a woman is living with a young child at the time of the census. It appears that immigrant women are 9% more likely to live with a young child than women of Canadian origin, whereas second-generation Canadian women would seem to be between 7% and 17% less likely, depending on whether both their parents or only one are foreign-born. However, when we control for other variables such as visible minority status, low income and education, the fertility differences between generational groups disappear completely. The differences between the generational groups as measured by means of the total fertility rate seem to be due more to differences in the composition of each group than to the generation effect. In short, if immigrant women and their daughters had the same characteristics as women of Canadian origin, they would have roughly the same number of children at home. Nevertheless, it must be recognized that one of the variables that has a substantial effect, namely visible minority status, is a characteristic that cannot be changed. When we control for the effect of the other variables, visible minority women continue to have a much higher fertility level than others.

## BIBLIOGRAPHY

- Abbasi-Shavazi, M.J. and P. McDonald (2000). "Fertility and Multiculturalism: Immigrant Fertility in Australia, 1977-1991", *International Migration Review*, volume 34 (1), pp. 215-242.
- Balakrishnan, T.R., G.E. Ebanks and C.F. Grindsaff (1979). *Patterns of Fertility in Canada, 1971*, Ottawa, Statistics Canada.
- Beaujot, R. (1991). *Population Change in Canada: The Challenges of Policy Adaptation*, McClelland and Steward, Toronto.
- Bélanger, A. (2000). *Reflections on the Evolution of Components of Demographic Growth in Canada in the Context of the Triennial Review of the Canadian Pension Plan*, Seminar on Demographic and Economic Perspectives of Canada, Office of the Chief Actuary, Ottawa. <http://www.osfi-bsif.gc.ca/>
- Boyd, M and E. Grieco (1998). Triumphant Transitions: Socioeconomic Achievements of the Second Generation in Canada. *International Immigration Review*, 32 (Winter), pages 857-876.
- Cho, L.J., R.D. Retherford and M.K. Choe (1986). *The Own-Children Method of Fertility Estimation*, University of Hawaii Press, 188 pages.
- Citizenship and Immigration Canada (2001). *Le Canada se réaffirme en faveur de l'immigration : la ministre Caplan dépose les niveaux d'immigration de 2002*, Ottawa, <http://www.cic.gc.ca>.
- De Pourbaix, I., Y. Lavoie and F. Nault (1982). "De l'utilisation par Statistique Canada de la méthode des propres enfants pour mesurer la fécondité actuelle", *Cahiers québécois de démographie*, volume 11 (1), pp. 5-18.
- Desplanques, G. (1993). "Mesurer les disparités de fécondité à l'aide du seul recensement", *Population*, volume 48 (6), pp. 2011-2024.
- Dumas, J. and A. Bélanger (1994). *Report on the Demographic Situation in Canada, 1994*, Statistics Canada, Ottawa, 151 pages.
- Goldstein, S. and A. Goldstein (1981). "The Impact of Migration on Fertility: An 'Own Children' Analysis for Thailand", *Population Studies*, July, pp. 265-284.
- Henripin, J. (1972). *Trends and Factors of Fertility in Canada*, 1961 Census Monograph, Dominion Bureau of Statistics, Ottawa.

- Hervitz, H.M. (1985). "Selectivity, Adaptation or Disruption? A Comparison of Alternative Hypothesis on the Effect of Migration on Fertility: the Case of Brazil", *International Migration Review*, volume 19 (2), pp. 293-317.
- Kalbach, W. (1970). *The Impact of Immigration on Canada's Population*, 1961 Census Monograph, Dominion Bureau of Statistics, Ottawa
- Massey, D. (1981). Dimensions of the New Immigration to the United States and the Prospects for Assimilation. *Annual Review of Sociology*, 7, pages 57-85.
- Ng, E. and F. Nault (1997). "Fertility Among Recent Immigrant Women to Canada, 1991: An Examination of the Disruption Hypothesis", *International Migration*, volume 35 (4), pp. 559-580.
- Ram, B. and M.V. George (1990). "Immigrant Fertility Patterns in Canada, 1961-1986", *International Migration*, volume 28 (4), pp. 413-426.
- Statistics Canada (2001). *Population Projections for Canada, Provinces and Territories, 2000-2026*, catalogue n° 91-520, Ottawa, 188 pages.
- Statistics Canada (1977). *Current fertility (own-children ratios) for married women*, catalogue 92-777 (SP-7).





# **HEALTHY AGING: THE DETERMINANTS OF AGING WITHOUT LOSS OF INDEPENDENCE AMONG OLDER CANADIANS**

Laurent Martel\*, Alain Bélanger\* and Jean-Marie Berthelot\*\*

For a majority of Canadians, old age is accompanied by the arrival of chronic conditions, activity limitations or dependence on others — family, friends, resources put in place by government — for carrying out the activities of daily living. Simply because of wear and tear over time, old age is often a stage of the life cycle that is associated with illness and decline. However, some people manage to live without depending on others, and they can thus extend the autumn of their life and take full advantage of their senior years. Old age, then, is not invariably associated with a gradual loss of functional independence.

In aging societies such as Canada's, it is crucial to understand the factors that promote healthy aging. As the large cohorts of baby-boomers age, the demand for health care and services should, all things being equal, increase. Working to prevent diseases, disabilities and dependencies and to promote good functional health within these cohorts could improve the health of the population of today and tomorrow, which is an effective strategy for limiting the expected increase in health expenditures. It could also help reduce the burden that dependence imposes on spouses and children, the main caregivers in the informal network. The purpose of this article is to identify the social determinants of dependence-free aging for Canadians 65 and over. For this purpose, the first four cycles of the National Population Health Survey (NPHS) were used, in order to determine changes in respondents' health status over a six-year period.

## **Summary of the Literature**

Up to now, the vast majority of scientific studies in epidemiology, medicine and health demography have focused on the prevalence and incidence of diseases, activity limitations, disabilities and dependencies, as well as the risk factors associated with them. Very few analysts have tried to study the positive aspect of health, identifying the determinants, not of the onset of a disease

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but rather of the maintenance, over a given time period, of good functional health beyond age 65. Nevertheless, a few studies, mostly American, have been published on this subject, especially in the last ten years.

In general, these studies have defined health as a functional capability, based on the activities of daily living (ADL) (Katz et al., 1963) and instrumental activities of daily living (IADL) (Lawton and Brody, 1969). From this perspective, remaining in good health means not developing any dependency toward others for the activities of daily living, consisting primarily of meal preparation, shopping, housework, personal care and moving about inside the home. This approach was adopted for the present study in the interest of comparability with other national and international studies and also because dependence is directly linked to the demand for home care services, which is not always the case with activity limitations or particular disabilities.

From the studies published thus far, we can identify four major groups of determinants of good functional health in old age: socio-economic characteristics, individual characteristics, behavioural factors and environmental factors. The first group consists of individuals' socio-economic characteristics. Many studies have already identified the direct relationship that exists between health and education or income, with better educated or wealthier persons generally enjoying better health or indeed greater longevity (Mackenbach et al., 1994; Nault et al., 1996). However, it should be noted that studies on the socio-economic determinants of functional health in old age are not conclusive. Some show an association between income or education level and dependencies (Guralnik et al., 1989; Burke et al., 2001), while others, including a Canadian study, do not (Palmore et al., 1985; Roos and Havens, 1991). While disparities in morbidity and mortality between rich and poor are generally greater in the United States, they are also observed in Canada, despite its universal health care system (Ross et al., 2001).

Individual characteristics, based on heredity for example, also appear to be important for maintaining good functional health. Thus, some studies have shown that among seniors, low blood pressure, a low cholesterol rate and a low level of glucose or urea in the blood are significantly associated with maintaining their independence (Benfante et al., 1985; Reed et al., 1998; Burke et al., 2001).

It may be that among the elderly, living habits are more important than genetic inheritance in maintaining good functional health. For example, Vaillant and Western (2001) have shown, following a cohort of adolescents over a period of 60 years, that good health at age 70 largely depended on living habits before age 50. Among the factors most often cited as determinants of good functional health in old age are not being a smoker, regular physical activity, maintaining a healthy weight, and moderate alcohol consumption (Mackenbach et al., 1994; Reed et al., 1998; Burke et al., 2001; Guralnik et al., 1989; Michael



et al., 1999; Benfante et al., 1985; Leveille et al., 1999; Martel et al., 2002). A few studies have also identified significant links between the presence of a large social network and good functional health (Strawbridge et al., 1996; Michael et al., 1999).

The fourth group of factors consists of chronic conditions. Some that are highly disabling, such as arthritis, back problems, stroke, diabetes and incontinence, are strongly associated with the loss of independence in old age (Guralnik et al., 1989; Leveille et al., 1999; Strawbridge et al., 1996; Roos et Havens, 1991; Martel et al., 2002).

The conceptual framework for this study draws on the work of Evans and Stoddart (1990), and accordingly it considers a vast array of potential determinants of good functional health. Five groups of variables were examined: individual characteristics (age, sex and living arrangements), socio-economic factors (income and education), living habits (smoking, alcohol consumption, physical activity and body mass index), chronic conditions (asthma, arthritis, diabetes, bronchitis and emphysema, back problems, cancer, stroke, heart disease, incontinence and glaucoma/cataracts) and mental illnesses (distress), as well as environmental factors (area of residence and social support). This study is consistent with the population health approach as defined by Health Canada (1998), which recognizes numerous health determinants.

### **Data, Variables and Method**

The data used in this study come from the longitudinal sample of the National Population Health Survey. Created in 1994, that survey is designed to collect extensive and detailed information on the health of the Canadian population every two years. The survey covers both residents of private households and those living in health care institutions. However, it does not cover members of the Canadian Armed Forces or individuals living on Indian reserves and in certain very remote areas. Since these groups constitute only a small fraction of the population, the NPHS is considered representative of the Canadian population as a whole in 1994. No additional respondents were admitted to the longitudinal sample once the first cycle was completed.

The study looked at the first four cycles of this survey, covering the collection periods 1994-1995, 1996-1997, 1998-1999 and 2000-2001. Only the sample of respondents living in private households was used, since by definition, residents of health care institutions are considered to be dependent on others for ADL and IADL. In all, the sample consisted of 2,685 persons aged 65 and over who provided a complete response to the questionnaire for the first cycle (1994-1995), representing some 3,200,000 elderly Canadians.

Within this sample, 365 respondents (15%) either could not be traced or stopped responding to the survey in one of the subsequent three cycles. Their

**Table 1. Socio-economic and Health Characteristics of Respondents Aged 65 and Over Living in Private Households, Based on their Participation in Successive Cycles of the NPHS Survey**

	Full Response 1994-2000	Non Response or Lost in Follow-up
Sample Size (number)	2,320	365
Percentage of Responses by Proxy in 1994	6.5	5.0
Mean Age (in years)	73.7	71.8
Percentage of Females	55.8	59.4
Percentage Widowed	30.9	26.1
Mean Health Utility Index	0.76	0.75
Perceived Health		
Excellent	12.8	12.0
Very Good	27.5	26.7
Good	34.6	29.6
Fair	18.7	26.2
Poor	6.4	5.4
Percentage Without Dependencies in 1994	81.9	86.4

**Source:** Statistics Canada, National Population Health Survey.

respect to perceived health status or the Health Utilities Index.<sup>1</sup> These findings suggest that attrition does not pose any particular problems in this study, and therefore those individuals were excluded from the analysis.

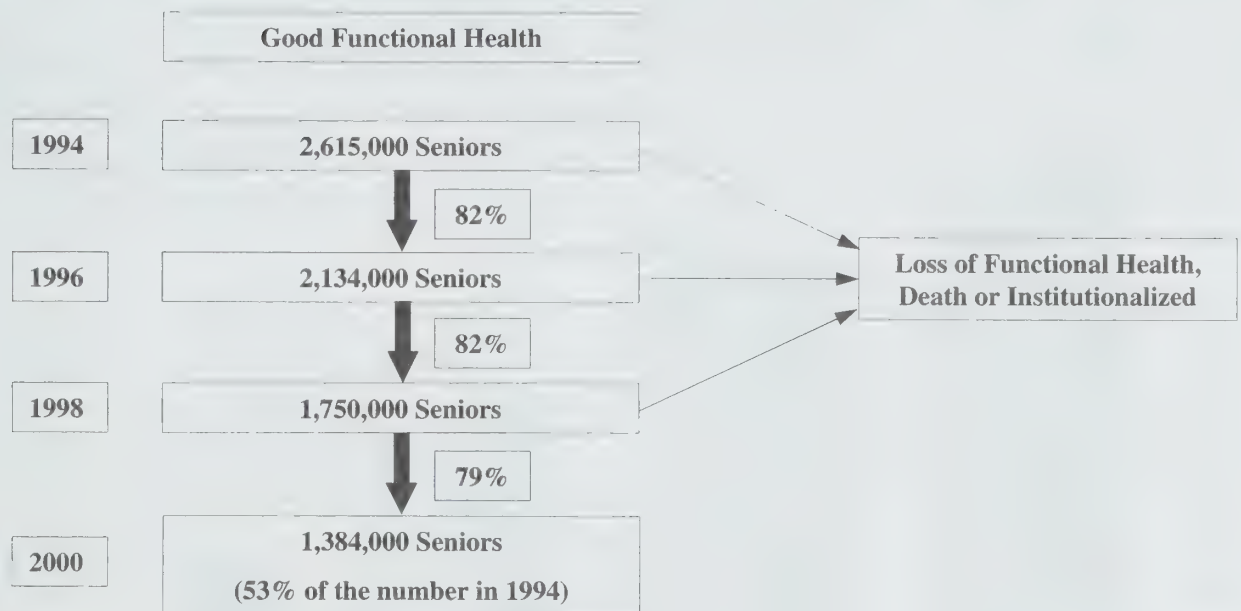
The sample selected therefore consisted of 2,320 respondents aged 65 and over living in private households in 1994-1995. Of this number, 1,830, or 82%, were free of any dependence on others for carrying out the following ADL and IADL: meal preparation, shopping, housework, personal care and moving about in the home. Accordingly, these respondents were the persons who might maintain their good health during the six years of observation, which is precisely the focus of the study. Those who died, entered a health care institution or developed a dependency were considered to have ceased to have good functional health.

Figure 1 summarizes the path of these initially dependence-free individuals over the subsequent three cycles of the survey. *Some 80% remained independent from one interview to the next, which took place two years*

<sup>1</sup> Developed by the Centre for Health Economics and Policy Analysis at McMaster University, the Health Utilities Index (HUI) is an indicator of an individual's functional health. It takes account of eight attributes: hearing, vision, speech, mobility, dexterity, cognitive abilities, pain and emotions. A value of 0 represents death and 1 represents perfect health. For example, an individual who is in perfect health but wears glasses will have an HUI of 0.97.

absence from the sample analysed could bias the results. This would be the case if, for example, their absence were due to greater mobility as a result of above-average health. Table 1 compares a few socio-demographic and health characteristics of these individuals to those of the elderly population that responded to all cycles of the survey. While they were somewhat younger and had slightly fewer dependencies than the population studied, the respondents who could not be traced or who stopped responding at some point in the process showed no significant differences from the others, even with

**Figure 1. Dynamics of Functional Health Among Elderly Canadians, 1994-2000**



**Source:** Statistics Canada, National Population Health Survey.

*later.* This proportion declines slightly between the last two cycles, but this is to be expected because of the aging of the survey respondents, the youngest of whom were 71 years of age in 2000-2001.

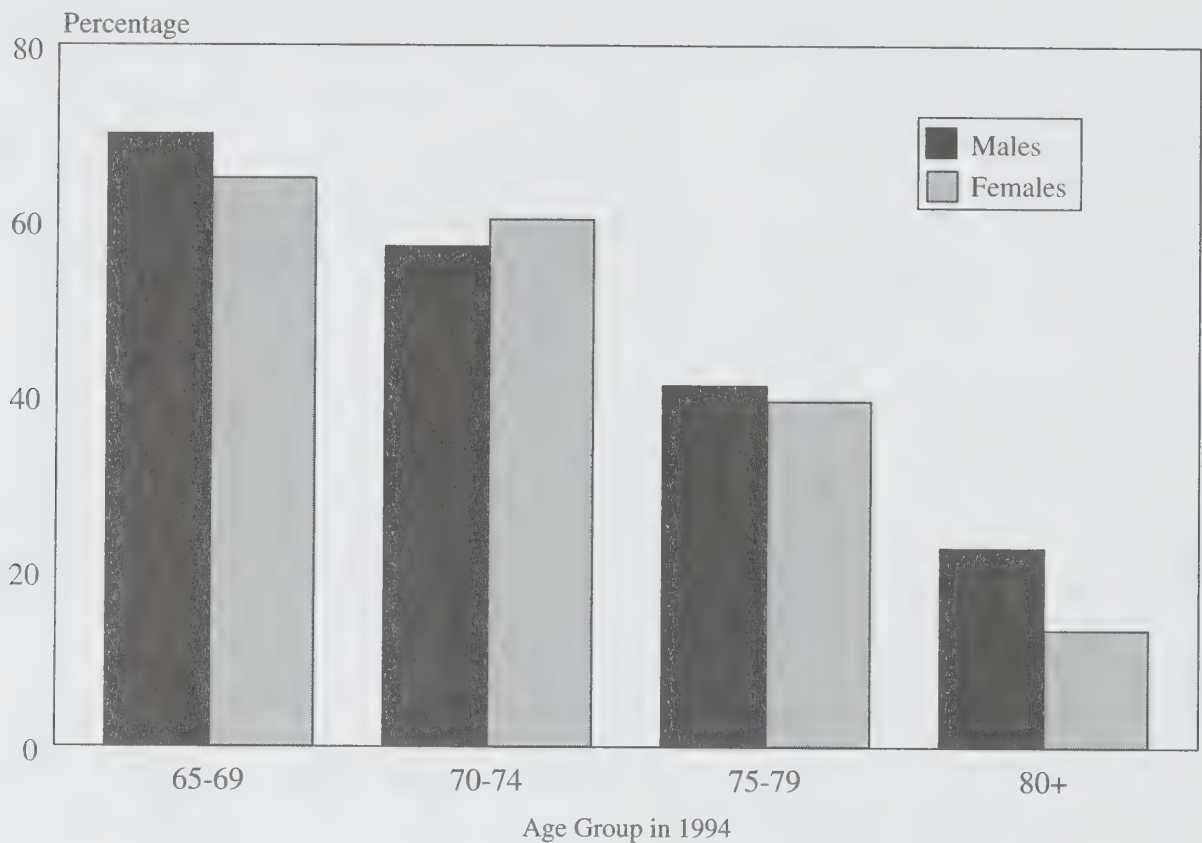
Some 13% of dependence-free seniors in 1994 lost their independence in each interval between subsequent cycles. From cycle to cycle, it was observed that nearly 1% were admitted to a health care institution and some 4% died. *In 2000, in the last cycle available for analysis, some 53% of seniors living in private households who were dependence-free in 1994 were still dependence-free six years later.*

Figure 2 shows the probability of remaining independent over a six-year period by age group and sex. No significant difference by sex was observed. Approximately two out of three persons aged 65 to 69 (in 1994) remained independent throughout the period. Among those aged 80 and over, however, the probability was roughly only one in five, indicating the powerful effect of aging.

The variables included in the regression model are presented in Table 2, for the elderly population in general in 1994, the dependence-free elderly population in 1994 and the elderly population that remained independent during the four cycles of the survey, that is, until 2000-2001. The table shows that the younger the population, the healthier it is. The average age of the population



**Figure 2. Proportion of the Elderly Population in Good Functional Health in 1994 Who Remained Independent from 1994 to 2000, Canada**



**Note:** The differences between sexes are not significant.  
**Source:** Statistics Canada, National Population Health Survey.

that remains functionally healthy is three years lower than that of the elderly population as a whole. The trend is the same for the average HUI, which goes from 0.76 for persons 65 and over in general to 0.87 for those who have remained independent. However, a breakdown of these different populations by sex shows no significant variation.

Among the variables included in the regression model, the “living arrangements” variable distinguishes between seniors living alone, those living with a spouse and those living with others but not a spouse. As may be seen in Table 2, the proportion living with others is significantly lower within the group remaining dependence-free, a result explainable by the fact that living with others is often a strategy that seniors who are losing their independence adopt in order to receive the assistance that they need. Conversely, seniors who have remained in good functional health are more likely to be in a couple relationship than the other two populations shown in Table 2.

Even though the differences are small, the table shows that on average, the more the population is selected for its good health, the higher the education

level. A relationship with income level is more clearly visible, since only 19% of individuals who remained dependence-free reported a low income, compared to more than 26% of the elderly population in general. To fall into the “low income” category, a respondent had either to live in a one- or two-person household and have a total household income below \$15,000, to live in a household of three or four persons and have an income below \$20,000, or to live in a household of five or more persons and have an income below \$30,000.

Some differences appear according to the living habits considered. While there are no significant differences as to tobacco use between these populations, there are significantly fewer non-drinkers. To be classified as having never smoked, a respondent had to report never having used tobacco in his/her life. The non-drinkers category includes both those who reported that they had never consumed an alcoholic beverage in their life and those who reported that they had not done so in the past twelve months.

There are fewer underweight seniors in the population remaining in good functional health. Also, that population includes more persons engaging in regular physical activity. Among seniors who had maintained their independence, more than three in five were active, while the corresponding proportion was only one in two in the elderly population as a whole. To be considered active, a respondent had to report participating at least 12 times per month in physical activities lasting at least 15 minutes. The body mass index (BMI), which is the ratio of weight to height squared, was used to classify survey respondents into the following three categories: underweight (BMI under 18.5), normal weight (BMI between 18.5 and 25) and overweight/obese (BMI greater than 25).

As expected, persons remaining in good functional health have significantly less bronchitis/emphysema, diabetes, heart disease, stroke and glaucoma/cataracts. Strokes are especially rare in this healthy population, and interestingly, so is heart disease. Almost 17% of the elderly population have this type of chronic condition, compared to only 8% of those who remained independent.

Another variable in the chronic conditions group considers mental health, using a distress scale. The variable constructed separates the population into two. The first group, which has a high level of distress, is made up of respondents who obtained a score of between 4 and 24 on the Kessler and Mroczek distress scale,<sup>2</sup> based on questions about feeling lonely, nervous, restless, hopeless, worthless, etc. These respondents are considered to be at high risk of developing mental health problems associated with psychological distress. The proportion with a low distress level is higher within the population remaining in good functional health.

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<sup>2</sup> Detailed information on the construction of this index is available in documents on the variables derived from the NPHS.

**Table 2. Percentage Distribution of Seniors by Selected Characteristics, Total Elderly Population, Those in Good Functional Health in 1994 and Those Remaining Independent from 1994 to 2000, Canada**

	Elderly Population in 1994	Elderly Population in Good Health in 1994	Elderly Population in Good Health in 1994-2000
Sample Size (number)	2,320	1,830	965
Socio-demographic Characteristics			
Mean Age (in years)	73.7	72.6	70.8
Percentage of Females	56.9	53.8	52.3
Living Arrangements			
Living Alone	32.8	30.5	28.9
Living with Spouse	54.4	58.4	63.3 **
Living with Others	12.9	11.1	7.8 ** <sup>E1</sup>
Education			
Post-secondary Diploma	16.9	16.9	20.0 **
Others	83.1	83.1	80.0
Income			
Low Income	25.6	22.5	18.8
Middle or High Income	74.4	77.5	81.2 **
Behavioural Characteristics			
Percentage who Never Smoked	40.9	39.7	41.2
Percentage of Non-drinkers	39.1	34.5 ***	27.8 ***
Body Mass Index			
Underweight	3.9	3.4 <sup>E1</sup>	1.3 *** <sup>E1</sup>
Normal Weight	45.6	44.4	45.6
Overweight / Obesity	50.5	52.2	53.1
Physical Activities			
Active	50.6	56.7 ***	63.8 ***
Inactive	49.4	43.3	36.2

See notes at the end of the table.

The fifth group of variables focuses on the environment in which seniors live. Two variables are included. Firstly, the area of residence — rural or urban — approximates access to health care and services, on the assumption that such access is limited in rural areas. Some four seniors in five were living in an urban area, a proportion that varies little from one population to another. Secondly, social support reflects the feelings expressed by respondents about their social network. Individuals with a high level of social support obtained a score above 2 on the social support scale developed by Stone and Beaudet.<sup>3</sup> This scale is based on questions concerning respondents' impression

<sup>3</sup> Detailed information on the construction of this index is available in documents on the variables derived from the NPHS.



**Table 2. Percentage Distribution of Seniors by Selected Characteristics, Total Elderly Population, Those in Good Functional Health in 1994 and Those Remaining Independent from 1994 to 2000, Canada - Concluded**

	Elderly Population in 1994	Elderly Population in Good Health in 1994	Elderly Population in Good Health in 1994-2000
Health Characteristics			
Mean Health Utility Index	0.8	0.8	0.9
Chronic Diseases			
Asthma	5.3	4.4	4.9 <sup>E1</sup>
Arthritis	40.7	35.2 ***	32.2
Back Problems (less arthritis)	18.9	15.9 ***	17.4
Bronchitis / Emphysema	7.0	5.1 ***	3.1 ** <sup>E1</sup>
Diabetes	10.5	8.9 **	6.3 * <sup>E1</sup>
Heart Diseases	16.9	13.7 ***	8.5 ***
Cancer	5.3	4.6	3.6 <sup>E1</sup>
Stroke	3.7	2.0 *** <sup>E1</sup>	— <sup>F</sup>
Incontinence	4.2	2.8 *** <sup>E1</sup>	2.4 <sup>E1</sup>
Glaucoma / Cataracts	16.5	13.9 ***	11.6 *
Mental Health			
Low Distress Index	72.1	77.1	81.9
High Distress Index	27.9	22.9 ***	18.1 ***
Environment Characteristics			
Social Support			
High	78.4	78.4	78.9
Low	21.6	21.6	21.1
Environment			
Rural	18.1	17.8	18.8
Urban	81.9	82.2	81.2

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

E1 : Estimate has a high sampling variability and should be interpreted with caution.

F : Estimate has a too high sampling variability to be published.

**Note:** The missing data was excluded for each of the variables. The significance levels for the column concerning the elderly population in good health in 1994 represents the differences between this population and the elderly population in general. The significance levels for the column concerning the elderly population remaining in good health for the entire 1994 to 2000 period represents the differences between this population and the elderly population in good health in 1994.

**Source:** Statistics Canada, National Population Health Survey.

of having a confidant, a person whom they can count on, a person who can give them advice and a person who makes them feel loved. No significant difference between the groups was noted for this variable.

The probability of remaining in good functional health over the six years of observation was modelled using logistical regressions designed to bring out the net effect of these variables while controlling for the disruptive effect

of other variables.<sup>4</sup> In a first step, the results are shown for each of the five groups of variables introduced previously. Five regressions<sup>5</sup> were therefore carried out, making it possible not only to identify the variables most associated with the dependent variable but also to measure, by the change in the pseudo- $R^2$ , the effect of the entire group of variables on the total variance of the model.<sup>6</sup> With this approach, the five groups of variables can be classified according to how much they affect the maintenance of good functional health during the observation period. In a second step, a complete model including only the significant variables shows their effect on seniors' maintenance of their independence.

All the variables included in the regression model were measured in 1994, in the first cycle of the survey. Variances as well as significance levels were estimated using the bootstrap weights method, which allows the complex survey design of the NPHS to be taken into account. The independent variables showed no significant multicollinearity.

## Results

Table 3 shows that as one ages, the odds of remaining independent diminish rapidly. *Compared to the 65-69 age group, seniors aged 80 and over are ten times less likely to remain in good functional health during the six years of observation.*

As with the descriptive analysis, the results of the regression analysis show that there is no difference between men and women as to maintaining independence when we control for the effect of age and living arrangements. The latter variable appeared significant, since respondents living with others are two times less likely to remain functionally healthy than those still living with their spouse.

In the second group of variables, dealing with socio-economic aspects, only the education level appeared significant, although the odds ratio<sup>7</sup> for income is in the expected direction. Individuals with a college or university diploma are 50% more likely to remain independent than others.

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<sup>4</sup> Twenty-one additional respondents were removed from the sample because of missing data for at least one of the independent variables. For some variables, such as income, when there were a large number of respondents with missing data, a "missing data" category for that variable was introduced into the model. The results for these categories are not shown, since they are extraneous to the analysis.

<sup>5</sup> The age and sex variables were introduced into each of these regressions in order to take these two important factors into account.

<sup>6</sup> The pseudo- $R^2$  is an indicator similar to the coefficient of determination calculated in linear regressions. The closer it is to unity, the more the set of independent variables included in the model explains the variation of the dependent variable. Therefore, this indicator is often interpreted as a measure of the performance of a statistical model. The index used in this article is the one proposed by Nagelkerke (1991).

<sup>7</sup> The odds ratio is the chance that persons having a given characteristic will experience a given event—in this case the maintenance of good health in the four cycles of the survey—in relation to a reference group that generally consists of those who do not have the said characteristic.

**Table 3. Odds Ratios of Remaining Independent Between 1994 and 2000, Population Aged 65 and Over, Canada**

	Characteristics					
	Socio-demographic	Socio-economic	Behavioural	Health	Environmental	Complete Model
Age						
65-69	1.00	1.00	1.00	1.00	1.00	1.00
70-74	0.72 *	0.70 *	0.64 *	0.65 *	0.69 *	0.66 *
75-79	0.33 ***	0.32 ***	0.32 ***	0.31 ***	0.31 ***	0.32 ***
80-84	0.10 ***	0.10 ***	0.10 ***	0.09 ***	0.10 ***	0.09 ***
85 +	0.10 ***	0.09 ***	0.09 ***	0.07 ***	0.09 ***	0.09 ***
Sex						
Males	1.04	1.06	1.19	1.21	1.16	1.21
Females	1.00	...	...	...	...	1.00
Living Arrangements						
Living Alone	0.91	...	...	...	...	0.61
Living with Spouse	1.00	...	...	...	...	1.00
Living with Others	0.54 *	...	...	...	...	0.98
Education						
Post-secondary Diploma	...	1.53 *	...	...	...	1.26
Others	...	1.00	...	...	...	1.00
Income						
Low Income	...	0.82	...	...	...	0.91
Middle or High Income	...	1.00	...	...	...	1.00
Smoking Behaviour						
Never Smoked	...	...	1.74 **	...	...	1.61 *
Others	...	...	1.00	...	...	1.00
Drinking Behaviour						
Non-drinkers	...	...	0.55 ***	...	...	0.60 **
Others	...	...	1.00	...	...	1.00
Body Mass Index						
Underweight	...	...	0.35 **	...	...	0.35 **
Normal Weight	...	...	1.00	...	...	1.00
Overweight / Obesity	...	...	0.84	...	...	0.85
Physical Activity						
Active	...	...	1.62 **	...	...	1.57 **
Inactive	...	...	1.00	...	...	1.00
Chronic Diseases						
Asthma	...	...	...	1.40	...	1.52
Arthritis	...	...	...	0.91	...	0.91
Back Problems	...	...	...	1.25	...	1.25
Bronchitis / Emphysema	...	...	...	0.39 *	...	0.36 **
Diabetes	...	...	...	0.57 *	...	0.59 *
Heart Diseases	...	...	...	0.39 ***	...	0.43 ***
Cancer	...	...	...	0.64	...	0.63
Stroke	...	...	...	0.47	...	0.45
Incontinence	...	...	...	0.86	...	0.97
Glaucoma / Cataracts	...	...	...	0.95	...	0.91
Mental Health						
High Distress Index	...	...	...	0.42 ***	...	0.50 ***
Low Distress Index	...	...	...	1.00	...	1.00
Social Support						
High	...	...	...	...	1.00	1.00
Low	...	...	...	...	0.70 *	0.73 *
Environment						
Rural	...	...	...	...	1.11	1.20
Urban	...	...	...	...	1.00	1.00
Pseudo-R <sup>2</sup>	0.17	0.17	0.22	0.25	0.17	0.30

\* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001.

**Source:** Statistics Canada, National Population Health Survey.



*All the variables reflecting living habits proved to be significant determinants for the long-term maintenance of good functional health among elderly Canadians. Thus, those who had never smoked had almost double the odds of living dependence-free throughout the period.* Conversely, seniors not consuming alcohol were two times less likely to remain in good functional health. This result, which might seem surprising at first glance but is similar to those of Andrews (2003), is probably related to the well-documented fact that moderate consumption of alcohol is beneficial to health, especially coronary health.

While being outside the normal weight range for one's height reduces the odds of maintaining one's independence during the four cycles of the survey, only the underweight group showed a significant difference. Persons in this group were three times less likely to still be independent in 2000 compared to those with normal weight. *Lastly, physically active seniors were 50% more likely to remain independent than those not engaging in physical activities on a regular basis.*

*Within the chronic conditions group, only diabetes, heart disease and bronchitis or emphysema significantly lowered seniors' odds of remaining in good functional health between 1994 and 2000.* Some other problems, such as stroke, exhibit low odds ratios, although they are not significant, probably because of the small number of survey respondents reporting these conditions.

Mental health is also important for the long-term maintenance of independence among seniors. Those who have a high level of distress are two times less likely to go through the six years of the study without losing their independence than those reporting a low level of distress.

Lastly, only the social support variable was significant within the group of variables relating to the effect of seniors' environment, with weak social support leading to an decreased likelihood of keeping one's independence.

When we compare the pseudo- $R^2$ s of the models excluding each of these different groups of variables in turn, it appears firstly that individual characteristics, especially age, have a major effect on the maintenance of good functional health, since without this group, the coefficient of correlation goes from 0.30 (pseudo- $R^2$  of the complete model) to 0.18 (Table 4). Omitting the socio-economic variables has almost no effect on the pseudo- $R^2$ . The absence of harmful living habits and the absence of chronic conditions have the same effect on the explanatory power of the model, reducing the index to 0.26. *Table 4 shows that in addition to individual characteristics over which individuals have no control, chronic conditions and living habits are important factors influencing the long-term maintenance of independence in old age.*

The last column of Table 3 shows the results of the complete model with significant variables drawn from the five groups. It is interesting to note

**Table 4. Pseudo-R<sup>2</sup>s of the Various Groups of Variables**

Group	R <sup>2</sup>	Lost Degrees of Freedom
Complete Model	0.30	31
Excluding Socio-demographic Characteristics	0.18	24
Excluding Socio-economic Characteristics	0.30	28
Excluding Behavioural Factors	0.26	25
Excluding Chronic Conditions	0.26	21
Excluding Environmental Factors	0.28	26

that living arrangements and education, which are each significant variables in their respective groups, are not significant once all variables are taken into account. Possibly the variables relating to living habits reflect, in part, the effect of education, with less educated persons also often having behaviours that are riskier for health. In the case of living arrangements, a similar effect is probably attributable to the variables relating to chronic conditions.

The odds ratios for the different variables in the last column of Table 3 differ very little from those obtained when they were in their respective groups. This indicates that the model has little multicollinearity and is robust. All the results obtained in the complete model are consistent with those obtained in the previous regressions and are of the same magnitude.

## Discussion

As expected according to the conceptual framework, many variables proved to be significantly associated with the maintenance of independence among seniors over a six-year period. Reflecting wear and tear on the organism, age is definitely one of the most important, but it is also one for which no corrective action can be taken. Since the NPHS is a panel survey,<sup>8</sup> the youngest respondents in the sample analysed were 71 years of age in 2000-2001, which suggests that with each new cycle, an ever-larger proportion of respondents will lose their independence.

The probability of remaining dependence-free does not differ between men and women. This result, which is echoed in the literature on the subject, is probably related to the fact that the model was constructed taking mortality into account. Since the probability of remaining independent throughout the four cycles of the survey was not conditional on survival, death was the most extreme form of loss of independence. Because of excess male mortality,

<sup>8</sup> With a panel survey, no new respondents are added once the survey is begun. Therefore the survey is representative of only the original population.



more men than women died during the period. On the other hand, women are more likely than men to have chronic conditions in old age. These two effects largely cancel each other out. Another study that analysed the loss of independence between the first two cycles of the NPHS among seniors who survived during the period showed that men have a lower probability than women of experiencing such a loss (Martel et al., 2002).

The socio-economic variables — education and income — are not significant in the complete model. This finding, similar to those from another Canadian study on the factors associated with healthy aging, is probably related to some extent to Canadians' universal access to health care, since most U.S. studies have shown an association (Guralnik et al., 1989; Burke et al., 2001). However, a recent study found that the risk of losing one's independence over a two-year period — that is, in the first two cycles of the NPHS — increased among seniors with less education (Martel et al., 2002). Relating this to the findings of the present study, it would appear that the longer the period over which the probability of maintaining one's independence is modeled, the less important are differences in socio-economic status, compared to other variables such as living habits, chronic conditions or simply age. In other words, education level and income level would appear to have an influence on rapid changes in health after age 65, but not over a longer period, when age, for example, takes on considerable importance.

*The results obtained in this study also show that it is possible to delay or even prevent becoming dependent by looking after oneself, that is, by adopting healthy living habits.* Avoidance of smoking and regular physical activity seem to be especially important in this regard. In the case of physical activity, a causal link operates in the opposite direction had often been found in other studies, since good health is also required in order to engage in physical activity. The present study shows however the effect of physical activity on health at older ages since all older persons were, in 1994, in good functional health.

Because of the small numbers involved, it was not possible to distinguish individuals with obesity from those merely overweight. Had this not been the case, it is possible that obesity would have had a negative effect on the probability of remaining in good functional health. It would also have been interesting to be able to take respondents' eating habits into consideration. While questions about this topic were asked in cycle 3 (1998-1999), they mainly concerned habits of the moment. Nevertheless, the body mass index may be considered a variable that approximates eating habits, since the two are closely linked.

A great number of chronic conditions were introduced into the model. Some, such as cancer or arthritis, while often significant in other studies, were not so in this one, even though the odds ratios are in the expected direction, toward a reduction in the odds of remaining independent. The low prevalence



of cancer in the Canadian population limited the number of cases present in the survey, which may explain this result in part. On the other hand, apart from its acute and terminal phases, cancer is not necessarily a disease that causes dependence on others. Many respondents with this disease may have reported not having any dependency for the daily and domestic activities covered.

The survey did not distinguish acute cases of arthritis from milder ones. It is possible that if it had done so, the effect of this disabling disease could have been better grasped. It may also be that seniors with acute arthritis reported a dependency in the first cycle of the survey and were therefore excluded from the population analysed. Lastly, since arthritis is a disease whose degenerative process is fairly slow, the six-year period of the study was perhaps too short to identify a loss of independence among seniors who suffered from this disease but were still dependence-free at the start of the study period.

Mental health and social support also have a considerable effect on the maintenance of independence. Up to now, few studies have attempted to look more deeply into their effect on health. Variables other than those included in the model might shed light on these links, but the problem of measurement remains a major obstacle.

Measuring the variables in the model is based on respondents' self-reporting, which can be subject to variations or recall error. It would have been useful to associate these variables with others based on more objective measures, such as blood tests or medical information. Questions of privacy protection and operational costs inevitably arise, but future surveys could prove to be invaluable tools if they opened doors in this area by collecting such information.

## **Conclusion**

Living without dependency is definitely a fundamental aspect of successful aging. This study shows that far from being entirely predetermined by heredity, the maintenance of good health also depends on adopting healthy living habits during one's life. Because living habits can be changed, it seems possible that if, in the future, effective policies and programs are developed to inform people early in their life cycle about the riskiest behaviours, this could improve the health status of the general population. Individual and collective responsibilities are thus shared.

More than 50% of seniors lose their independence over a six-year interval. Promoting good health could help delay — and prevent — the onset of some functional health problems among seniors, thereby making them less dependent on both their family and the public health care system.

## BIBLIOGRAPHY

- Andrews, G., M. Clark and S. Davis (2003). "The Oldest Old - How Can their Voices be Heard? - Evidence from a Longitudinal Study of Ageing", paper presented at the third IUSSP Seminar on Longevity and Health, *Increasing Longevity: Causes, Consequences and Prospects*, Rockefeller University, New York, October 20-22, 2003.
- Benfante, R., Reed, D. and J. Brody (1985). "Biological and Social Predictors of Health in an Aging Cohort", *Journal of Chronic Diseases*, 38 (5), pp. 385-395.
- Burke, G.L., A.M. Arnold, D.E. Bild, M. Cushman, L.P. Fried, A. Newman, C. Nunn, and J. Robbins (2001). "Factors Associated with Healthy Aging: the Cardiovascular Health Study", *Journal of American Geriatrics Society*, 49 (3), pp. 254-262.
- Evans, R.G. and G.L. Stoddart (1990). "Producing Health, Consuming Health Care", *Social Science Medicine*, 31 (12), pp. 1 347-1 363.
- Guralnik, J.M. and G.A. Kaplan (1989). "Predictors of Healthy Aging: Prospective Evidence from the Alameda County Study", *American Journal of Public Health*, 79 (6), pp. 703-708.
- Health Canada (1998). *Taking Action on Population Health*, working paper for employees of the general office and health programs.
- Katz, S., A.B. Ford & R.W. Moskowitz (1963). "Studies of Illness in the Aged. The Index of A.D.L., a Standardized Measure of Biological and Psychological Function", *JAMA*, 185, 12, pp. 914-919.
- Lawton, M.P. et E.M. Brody (1969). "Assessment of Older People: Self-Maintaining and Instrumental Activities of Daily Living", *The Gerontologist*, 9, 3, pp. 179-186.
- Leveille, S.G., J.M. Guralnik, L. Ferrucci and J.A. Langlois (1999). "Aging Successfully until Death in Old Age: Opportunities for Increasing Active Life Expectancy", *American Journal of Epidemiology*, 149 (7), pp. 654-664.
- Mackenbach, J.P., J. Van Den Bos, J.M. Joung, H. Van de Mheen and K. Stronks (1994). "The Determinants of Excellent Health: Different from the Determinants of Ill-Health?", *International Journal of Epidemiology*, 23 (6), pp. 1 273-1 281.
- Martel, L., A. Bélanger and J.M. Berthelot (2002). "Loss and Recovery of Independence Among Seniors", *Health Reports*, Statistics Canada, catalogue n° 82-003, 13 (4), pp. 37-52.

- Michael, Y.L., G.A. Colditz, E. Coakley and I. Kawachi (1999). "Health Behaviors, Social Networks, and Healthy Aging: Cross-sectional Evidence from the Nurses' Health Study", *Quality Life Research*, 8 (8), pp. 711-722.
- Nagelkerke, N.J.D. (1991). "A Note on a General Definition of the Coefficient of Determination", *Biometrika*, 78, pp. 691-692.
- Nault, F., R. Roberge and J.M. Berthelot (1996). "Espérance de vie et espérance de vie en santé selon le sexe, l'état matrimonial et le statut socio-économique au Canada", *Cahiers Québécois de Démographie*, 25 (2), pp. 241-257.
- Palmore, E.B., J.B. Nowlin and H.S. Wang (1985). "Predictors of Function Among the Old-Old : a 10 Year Follow-up", *Journal of Gerontology*, 40, pp. 244-250.
- Reed, D.M., D.J. Foley, L.R. White, H. Heimovitz, C.M. Burchfiel and K. Masaki (1998). "Predictors of Healthy Aging in Men with High Life Expectancies", *American Journal of Public Health*, 88 (10), pp. 1 463-1 468.
- Roos, N.P. and B. Havens (1991). "Predictors of Successful Aging: a Twelve-Year Study of Manitoba Elderly", *American Journal of Public Health*, 81, pp. 63-68.
- Ross, N.A., M.C. Wolfson, J.R. Dunn, J.-M. Berthelot, G.A. Kaplan and J.W. Lynch (2001). "Relation between Income Inequality and Mortality in Canada and in the United States: Cross-sectional Assessment Using Census Data and Vital Statistics", *British Medical Journal*, 320, pp. 898-902.
- Strawbridge, W.J., R.D. Cohan, J.J. Shema and G.A. Kaplan (1996). "Successful Aging: Predictors and Associated Activities", *American Journal of Epidemiology*, 144, pp. 135-141.
- Vaillant, G.E. and R.J. Western (2001). "Healthy Aging Among Inner-City Men", *International Psychogeriatrics*, 13 (4), pp. 425-437.













- The growth rate was 11.2 per 1,000 in 2001, up 10% in comparison to 2000, but Newfoundland and Labrador, Saskatchewan, New Brunswick and Nova Scotia saw a decline in their populations.
- The number of births fell in all provinces between 1999 and 2000 and the total fertility rate reached 1.49 children per woman, the lowest rate ever recorded.
- There were 105,400 abortions in Canada in 2000, representing about a third of all births.
- Canadians enjoy one of the longest life expectancies at birth: 76.7 years and 82.0 years respectively for males and females in 2000.
- Canada received 250,400 new immigrants in 2001, an increase of 10% compared to 2000. Net migration accounted for 68% of total growth.
- For the first time since 1994, Quebec lost fewer than 10,000 persons in its migratory exchanges with the other Canadian provinces.
- Total fertility rate for women born in Canada was 1.47 children per woman for the period 1996-2001, the rate for women born abroad was 1.82 children per woman.
- Non-smoking, regular physical activity and having a normal weight all play a significant role in determining whether elderly Canadians maintain their independence over the long term.











